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\*

**PRINCIPAL CONTENTS**

Some recent Danish Experiments in Neolithic Agriculture

by AXEL STEENBERG

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The British Plough: Some Stages in its Development

by F. G. PAYNE

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The Rabbit in England

by ELSPETH M. VEALE

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**THE BRITISH AGRICULTURAL HISTORY SOCIETY**

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## The Agricultural History Review

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# THE Agricultural History Review

Vol. v Part II

Edited by H. P. R. FINBERG

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## Some recent Danish Experiments in Neolithic Agriculture

By AXEL STEENSBERG

MORE than two hundred years ago the idea was advanced that prehistoric agriculture started by man's cutting down the primeval forest and burning most of the trees and branches in order to sow his corn-seeds in the ashes. The father of this theory was the Finnish agricultural chemist P. A. Gadd, who wrote in the year 1753 his *Ovålduga tankar om jordens svedande och kyttande*. Later on his idea was developed and made more generally understandable, amongst others by Professor Gudmund Hatt. And when the Danish botanist Johannes Iversen in the late thirties found a layer of charcoal in a Seeland bog, he explained it as the result of the neolithic farmer's first reclamation of arable land. It may perhaps be a question if this very first charcoal layer came from a neolithic settler's burning of the wood or not. But Iversen's great knowledge of botany and his development of the technique of pollen-analysis soon taught him to discern in the pollen diagrams the actual layers that were due to different periods of clearance.

At these turning points in the diagrams a sudden decline of pollen from oaks, lime, elm, and ash was followed by a sharp rise in grasses and herbaceous plants, soon also of birch and hazel. At the same time pollen of cereals and weeds appeared for the first time, and plantain especially became extremely common. All this goes to show a typical development such as one might expect after clearance, cereal cultivation, and extensive cattle grazing. Details seemed to show that the clearance was combined with burning.

Burning of woodland and scrub was practised of course long before agriculture started. Apparently it was known already in Interglacial times. And in a recent paper on Slash-and-Burning (Kuml, 1955) I showed that primitive hunters and plant-gathering peoples made use of the crackling flames in order to improve their berry-grounds, to produce better grass for wild animals, or to kill gnats and other insects. In Mongolia the nomads also burned off grasslands in order to improve the vegetation for their herds. Maybe the cultivation of grain started in Western Iran on the border line between the highland steppes and the sloping and wooded mountains, as I have suggested, because seeds of the wild ancestors of barley and wheat were accidentally blown into the burned-off areas of the hunters, and were found to grow abundantly.

In my opinion the term 'Slash-and-Burn' is a good general term for all these modes of improvement. Therefore I do not agree with Professor Ekwall when, in *Man*, 1955, he proposes to use the term "swidden" for the burning and cultivation of wooded land. This term has a special meaning in the Scandinavian languages. It means to clear and burn repeatedly in a sort of rotation. And when prehistoric farmers began to till the soil the wooded areas were so immense that repetition of burning on the same piece of land would hardly be needed in a man's life-time. On the other hand I am not convinced that prehistoric farmers needed to move their sites very often. To judge from modern parallels too much stress has been laid upon the periodic moving of the villages of the early agriculturists.

Much can be learned from the study of Slash-and-Burn agriculture in modern times. But could neolithic man really have cleared large areas of the thick primeval forest with his clumsy flint axes? And what would be the effects of clearance in a North European deciduous wood? We know that mixed oak forests and beech forests were cleared by fire in northern Germany as late as the early eighteenth century. But no living person has seen the results of it. Therefore, at the suggestion of Dr Johannes Iversen, a team of ecologists and archaeologists, led by him, decided to put these questions to the test of field experiment. The others were Dr Troels-Smith, Svend Jørgensen, and myself from the Danish National Museum. We obtained the needed funds from the Carlsberg Foundation and a permission from the forest authorities to clear about two acres of wooded land in the Draved forest in south Jutland. This forest is a mixed oak forest like that of neolithic times, and this was the reason why it was chosen. However, the forest proved to have one drawback. It is situated on a plain surrounded by moors and bogs, and accordingly the height of the water table is rather elevated. In contradiction to this the clearance of neolithic man as well as those of modern Slash-and-Burn agriculturists have usually been placed on sloping grounds.

In order to control the test, only a part of the area was to be burnt, while another part was only cleared. Svend Jørgensen and Dr Troels-Smith took charge of the axe tests. They obtained a number of original neolithic flint axe blades from the National Museum, and a model for the wooden haft was available in the form of the well-known Sigerslev hafted axe, excavated from a Seeland bog. The first tests were made in February 1952 in a temperature of 3 to 4 centigrades. At the second cut one axe was totally broken. Two minutes later the biggest blade was cracked transversally. And after three or four minutes the edge of the third axe was spoilt. The last and smallest axe had the handle split at a too violent stroke. The lesson was: (1) that flint axes have to be treated carefully in frosty weather; (2) that if the haft was not

to be split, it must not hold the blade too tightly, but must leave room for a little sideways play when struck; and (3) that the usual tree-chopping technique, in which one puts one's shoulders and weight into long, powerful blows, would not do. The lumber-jacks, unable to change their habits, damaged several axes. The archaeologists soon discovered that the proper way to use the flint axe was to chip at the tree with short, quick strokes, using mainly the elbow and wrist. Troels-Smith worked with an axe blade which had not been sharpened since neolithic time, and he finished the clearing operation without spoiling it.

When the two archaeologists reached the top of their form they were able in co-operation to fell oak trees more than a foot in diameter within half an hour. Small trees they felled by cutting all around the trunk. But on heavier ones they had to use the slower method of hewing two notches, one at each side, and one a little more elevated than the other in order to control the direction of the fall. In all forest clearance for burning the trunks must fall in the same direction; furthermore, this direction in Draved forest would be north-south, because thus the wood would dry more quickly. The biggest trees were not cut down but killed only by cutting rings through the sapwood.

It was interesting that Troels-Smith, during excavations in a Swiss lake-dwelling, had found trees cut in the same way as in Draved by hewing a notch at each side, and the splints of wood proved to have been flaked out parallel to the trunk by cutting grooves above and beneath until the two grooves met each other near the centre of the trunk. And when Professor Forbes of Amsterdam read in the newspapers about the test of tree-felling at the Museum of English Rural Life in Reading during Dr Iversen's stay in England (1954), he wrote to me and related how he had observed the Borneo Bataks cutting trees in a trial with some Chinese coolies in order to amuse a new Dutch governor. The Bataks used stone axes, the coolies American steel axes. The coolies gained the victory, and what is more interesting, Professor Forbes described their technique of cutting as identical with that of Troels-Smith and Svend Jørgensen when clearing wood in Draved. The experiment of Draved also proved that the beech tree is far the most difficult to fell. But this tree was extremely rare in the forests of neolithic times.

The burning was directed by Professor Kustaa Vilkkuna of Helsinki in Finland, who is an expert on primitive burning techniques. He is a farmer's son and has worked by Slashing-and-Burning himself. But Iversen, Troels-Smith, and I have attended Finnish burnings of coniferous areas. However, in a deciduous wood the great question is to have the twigs and branches sufficiently dried. If they were cut down the year before, you have to lift

them out of grass and other herbs, which have overgrown them during autumn and spring. The first time, in 1953, the test partially failed because the wood was not dry enough, and not even by using a modern flame-sprayer could we burn it. This instrument produced a flame and could be useful in a coniferous area. But here we needed a great starting heat; later on this could more or less dry out the wood behind the flames, if it should happen to be not quite as dry as it ought to be.

Next year, 1954, the burning was successful. The ignition took place along a 30-feet wide belt by means of torches of birch bark attached to stakes. When the belt was well cleared we pushed the still burning logs forward with long poles in order to set fire to the adjacent area. In this manner we burned off the entangled branches of trees, belt by belt. The fire was controlled and conducted day and night in order to achieve an even and thorough burning of the ground. And in three or four days the job was finished.

Immediately after the burning we were going to sow. Archaeological finds of charred corn and impressions of grain in excavated pottery have attested that in Denmark neolithic man made use of three sorts of wheat: *triticum monococcum* (or Einkorn, also called Small Spelt), *triticum dicoccum* or Emmer, and *triticum compactum* or Club Wheat—and the nodding six-rowed naked barley, *hordeum vulgare*. Most of these primitive cereals are still cultivated at experimental stations and can easily be acquired. Only the *compactum* wheat caused some trouble until at last I got it from the Rinn experimental station in the Austrian Tirol.

The next question was how the grain should be sown? No digging sticks from the neolithic period have been found. And some fine spades, which were found last summer in a south-Jutland bog by Professor Schwabedissen of Kiel, could not be of any use to us. They are well dated to the early neolithic age, but they are universal tools with symmetrical blades, not especially adapted to digging cultivation. They may have been used for clay digging as well. Nearly all peoples who in modern times use the Slash-and-Burning technique use the digging stick. Even in the Alpine regions, where wheat and barley were sown in very small fields, the women put the grains into holes made by the digging stick.

Therefore we started our sowing using a digging stick. Later on I experimented in making drills with the stick, and also in sowing broadcast and afterwards scratching the grain into the ground with a wooden rake. When using the digging stick, I made 50-70 2-4 cm. deep holes per square metre, that is to say about 15 cm. distance between the holes, and in the case of drilling the distance between the rows was about the same. We learned from this experiment: (1) that the grain is better protected against birds

when put into holes; (2) that it came up more equally distributed when put into holes; (3) that *triticum monococcum* grain is difficult to cover when sown broadcast because of its great surface in proportion to its weight, especially when a great multitude of charcoal is spread upon the ground; (4) that the grain sown in holes and drills had an advantage in the beginning, but just before harvesting no real difference was to be seen between grain sown in holes and that which was broadcast (perhaps the ripening was a little delayed in the case of broadcast seed, which was due to the later sprouting); (5) weeding as well as harvesting is a little easier when the grain has been sown in holes, because the corn stalks are then growing in bundles.

On the 22nd of April 1953, when we did our sowing, the soil was wet and inconvenient for the grain. The summer was rather dry, but the harvest-time wet. A great many ears of corn were broken off just before or during the ripening process; birds and mice had eaten them. Therefore it was difficult to estimate the real output of the harvest. The next year, when we burned a larger area, the sowing was even later because of late spring, the 25th of May to the 9th of June. This year the soil was in a condition for sowing that would please every farmer. And the sprouting developed quite perfectly. By the 27th of June the first seed sown had reached 50 cm. height and the latest 15–25 cm. By the 2nd of August the first seed sown was a little more than one metre high. But the summer of 1954 was one of the wettest Denmark has had in this century, and the harvest was delayed until September. When I harvested the first plot on the 9th of September, the stalks had already been broken off 10 cm. beneath the spikes, even if the corn was hardly quite ripened. And I was harvesting in plain water with rubber boots on my feet.

Estimated per hectare the quantity of seed sown was rather large. In 1860 the normal barley seed per hectare in Jutland was about 130–135 kg. In Draved, 1953, the seed of *hordeum vulgare* was 155 kg. in holes, in 1954 204–310 kg. broadcast, and 50 kg. in holes. And in 1955 the seed of six-row barley was 310 kg. broadcast. From these figures it will easily be seen that you will *save at least half the amount of seed by putting it into holes*. In 1953 the yield of *hordeum vulgare* was only 90 kg. per hectare, less than had been sown, but this poor result was due to the fact that nearly all ears had broken and fallen off before harvesting. In 1954 the harvest was about three times the seed sown, even if the same factor had been acting, breaking down the ears just before harvest. In 1955 the harvest of six-row barley was less than the seed sown. However, this year no new areas had been burned; the seed was sown in the same field as in 1954, i.e. it was the second harvest of a burned area.

The breaking off of the ears must have been due to some local factor, per-

haps to the high water table in Draved, which causes some disease in the stalks. We know from Scania in Sweden that the harvest of rye in olden times was often 16-24 times the seed sown after burning, in comparison with 2-5 times in the normally tilled village fields. According to the luxurious growth of the stalks in Draved we should have expected a yield of the same quantity, if these local factors had not spoiled the harvest.

Small areas were sown in unburned woodland close to the burned areas, in order to compare the two methods of cultivation. These small corn-plots—or “reiter,” as we called them, using a Norwegian term—were hoed by a wooden hoe, and afterwards the seed was either sown in holes or broadcast. In both cases the sprouting was insufficient, and the few stalks growing up suffered severely from lack of natural nutrition in the soil.

What are the factors which cause the difference in growth of the seed in soil treated with fire and soil only tilled by a wooden hoe? Different opinions have been advanced on this point. Earlier it was a general conviction that the ashes of burnt twigs and branches—mainly potash—produced an effective nutriment for the vegetation for a year or two, and afterwards the area had to regenerate for twenty years or more. The Swedish Professor L. G. Romel has spoken of a special *assart effect*, which can be obtained by cutting down all the trees, even without burning. He tells us that Finnish *assarters* knew a hundred years ago that it was not the ashes that fed their crops so well, it was something produced by an acidifying or “souring” of roots or trees newly felled. Thanks to this *assart effect* even the supposed “inactive,” tough “mor” (i.e. acid humus) of old and poorly growing northern spruce-woods quickly releases ammonia in great quantity once the so called “mor” has been severed from the old spruce. Samples of such “mor” stored in a laboratory had up to 30 per cent of its total nitrogen available after a year and a half of storage. In comparison the best Danish beech mould would have less than one-half of this percentage. According to Romel this *assart effect* is believed to have a good deal in common with green manuring. He thinks it has done away with the acid “mor” in the Danish beech forests during the last hundred years, because the Danish foresters cut areas of the woods down totally instead of felling single trees here and there.

Another interesting fact is that after the burning the lack of nitrates favours a vegetation of nitrogen-plants such as broom, alder, and others. This effect is specially notable. And in further India alder was actually planted, as the ashes from this tree were considered particularly valuable. Generally speaking, it was important not to burn the soil “to death,” destroying all the bacterial cultures and the lower animal life. On the other hand the flames had to be kept down to the ground surface. It was a question

of not allowing excessive heat. But the intensity of the action of the fire depended to a high degree on the object of the burning and on the type of soil and vegetation of the site. In France marl was burnt and in England clay, as the fire was thought to release mineral fertilizing substances. Finnish sources state that it was most desirable to "kytta" on clay subsoil. In Esthonia burning should preferably take place above good loose soil with a high humus content, but there should not be too much grass in the undergrowth. Where, as in Siegen, Germany, the trees were desired to shoot up quickly again, the roots must not be destroyed. Too severe burning would also prevent the growth of grass, and if too large an area were thoroughly burnt off, the trees were prevented from sowing their seed and the wood thereby from regenerating. Therefore there was a risk that the area might become a heathland. The same was true if the topsoil was burned to death.

Quite recently the agricultural chemist Sigurd Larsen told me that he had been experimenting on the effects of heat in relation to soil fertility in modern farming. In constantly tilled and fertilized soils, such as plant-nurseries, the effect of heating may be especially of a sterilizing nature. Of course the competition of weeds will also be less for a short time. And this was striking the first year after burning wood in Draved. Two other factors may be of great importance in Slash-and-Burn culture: (1) the emancipation of nutrients of the soil, and (2) an alteration of the reaction of the soil in a more alkalic direction.

In relation to the first point it has been proved by several experiments that when the soil has been heated, the amount of dissoluble manganese increases for a short time. Sigurd Larsen has been more interested in the phosphate content. The content of inorganic phosphate in the soil seems to be stable under a heating up to 100 centigrades, but if you heat the soil to higher degrees it seems that the reception of phosphate by the vegetation increases notably. However, exhaustion of the soil will soon follow.

In relation to the second point, the alteration of the soil reaction, the treatment should be more effective the more acid the natural soil condition is, because wood-ashes are especially rich in potash (calcium-carbonate). According to this, virgin forest should be the most suitable for Slash-and-Burn cultivation, better at least than a modern Danish beech forest. But in some cases the effect may be the opposite of what was intended. Oats, for example, grow best by a relatively low and a relatively high basic reaction. They have two optima of reaction. Other plants may require different conditions. But the potash will soon be washed out, and this factor, in addition to the exhaustion of the soil for phosphate, may be the chief explanation of the very quick impoverishment of Slash-and-Burn areas.

In Draved the growth of the crops was very rich the first year after burning the wood, and the rather acid forest soil may be one of the reasons for this. However, the same factor may have stimulated diseases which caused the spikes to break off and fall to the ground just before harvest. And whatever the beneficial factors were which caused the luxuriant growth of the cereals just after the burning, they were short-lived. In the second year the burned area produced much smaller crops.

Now, three years after the burning, Dr Iversen is watching the developments of the early recovery of natural plant growth. The burnt and the unburnt areas are developing quite differently. In the area cleared of trees but unburnt, events are following an expected course. The ground vegetation consists mainly of the same species which grew there before the wood was cleared away, though the open sunlight stimulates their growth. And ferns, sedges, and grasses flourish more than before. On the other hand, the burnt ground has suffered quite a revolution. Ferns are coming back here too, but most of the old vegetation, having shallower roots, was killed by the fire. Instead we have quite a garden of new plants. Plantain has made its appearance, as was learnt formerly from the pollen diagrams. But spores of mosses too, wind-blown, have found their way into the clearing, and Iversen has tried to find out if mosses were increasing also in the neolithic period. It seems that there really was a sharp rise in general moss growth immediately after the clearances reflected in the pollen diagrams.

In Draved we have pastured goats and calves on some parts of unburnt area as well as on the burnt. But it is too early to say anything definite about the results of the experiments, which are still going on, after the burning and sowing. Quite provisionally I have tried to draw some conclusions from the experiments in Draved forest. Deliberately I have done it rather vaguely, because much work has still to be done before the results can be published.

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# The British Plough: Some Stages in its Development

By F. G. PAYNE

THE plough has a long history in Britain. That is evident when we contemplate the surviving traces of our ancient field systems, some of them going back as far as the Bronze Age. Of the ploughs that tilled those early fields we know very little. Until fairly recently the early ploughs of northern Europe in general were very imperfectly known. A good deal of new evidence was discovered during and shortly after the last war and most of this was included in Professor Glob's *Ard and Plough in Prehistoric Scandinavia*, published in 1951.

This work of Professor Glob's is of the greatest value in interpreting the remains of our early British implements which, although scanty, show clearly enough that some of the same types of ploughs were found on both sides of the North Sea. The Danish evidence, which is particularly rich, shows that there were two, and possibly three, types of plough in use in Denmark in Late Bronze Age and Early Iron Age times. The best example of one of these types is the implement found at Donneruplund in 1944 (Fig. 1a), consisting of four main parts: beam, stilt, ploughshare, and 'fore-share'.

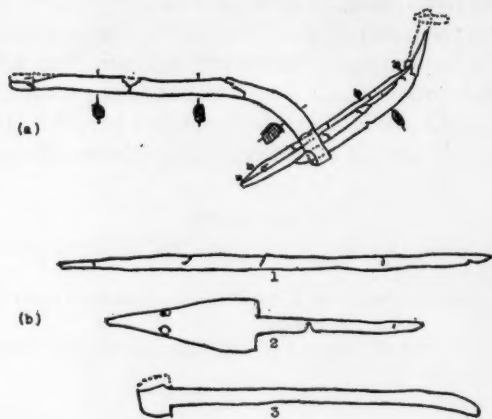


FIG. 1

(a) Plough from Donneruplund. (b) 1. Fore-share; 2. Ploughshare; 3. Stilt.

After Glob: *Acta Archaeologica* XVI.

This is the only reasonably complete example so far discovered. It proves that the well-known specimen found at Døstrup in 1884 was incomplete, that it had lost a very important part, the ploughshare. It is important to realize this because the Døstrup specimen has given students a false idea of the capabilities of this type. The size of the mortise in the beam foot itself should have raised doubts about its completeness. Common sense, too, should have suggested that no one could have been so silly as to fashion such a plough merely to drag a thin pointed stick through the earth.

This pointed stick, or 'fore-share' (Fig. Ib, 1) as it is convenient to call it, had its own important function to perform. Clamped between two pegs let into the upper surface of the ploughshare as in the Donnerupland example (Fig. Ib, 2), or between ridges as on the upper surface of the Trollerup share (Fig. II), it protected these valuable parts. Projecting and cutting before the share point, it would take a good deal of the wear.

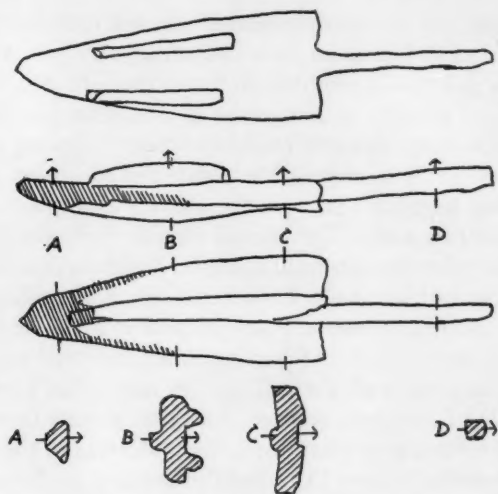


FIG. II

Ploughshare from Trollerup.

*After Glob: *Ard and Plough*.*

There are two further points about the Donnerupland plough that should be emphasized. First, the sides of the ploughshare, being unprotected by the fore-share, exhibit signs of considerable wear. This wear is much greater on the right-hand side, indicating that when at work the plough was tilted to the right. In consequence, the large ploughshare would turn some of the soil to

the one side, acting in fact something like a mould-board. The second point is that the position of this implement in the bog where it was found indicated a date in the beginning of the Early Iron Age or the end of the Late Bronze Age.

I have dealt with this Danish plough in some detail because there is evidence that ploughs of the same type were once used in Britain also. The first piece of evidence is a plough-beam found about the year 1870 in a peat bog near Lochmaben in Dumfriesshire (Fig. III). The importance of the discovery

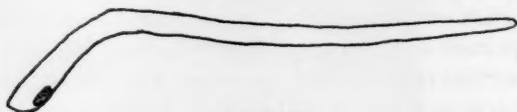


FIG. III

Plough-beam from Lochmaben.

*By permission of the Burg Museum, Dumfries.*

was not appreciated at the time; indeed it was not identified for what it is until after its arrival at Dumfries Museum a few years ago. Although badly warped, the plough-beam is complete. It has its draught-hole for attachment to the ox-yoke and also the large mortise in the beam foot through which ploughshare, fore-share, and stilt would be wedged. Owing to the circumstances of its discovery it is not possible to date this specimen, but its deposition in a peat bog suggests that, like the Danish examples, it was a ritual offering and therefore early. The second British find, also from southern Scotland, is a one-piece plough-head and stilt. This was found by Mrs C. M. Piggott in 1953 beneath a crannog in Milton Loch, Kirkcudbrightshire. The crannog itself is said to date from the second century A.D. The plough-head is similar to that of the incomplete Døstrup plough referred to above; similar in that it is in one piece with the stilt, and in that it has a long groove cut down the middle of its upper surface. Into that groove there would have fitted a ridge or tongue projecting from the underside of the large ploughshare which in both the Milton Loch and the Døstrup implement is missing. Fig. II illustrates the kind of share. The lowest view shows the central ridge along the underside which helped to secure the share to the plough-head. The top view shows the upper surface with parallel ridges to receive a fore-share.

These plough parts from Lochmaben and Milton Loch show that at least one type of continental plough of the prehistoric period was in use in Britain. There is as yet no definite evidence that a second type dealt with by Glob, namely the so-called crook ard, occurred here also. It is, however, worth while considering for a moment the fact that these earliest ploughs of north-

ern Europe are of types that nowadays belong to southern Europe and the Mediterranean region. They have neither coulter nor mould-boards and appear to be suited to the methods of tillage usual in warm dry climates. Indeed, it would seem that these early northern implements provide evidence in support of the botanists and others who tell us that the climate in the Bronze Age in north-western Europe was dry and warm. They are of the type used where climatic conditions render it necessary for the ploughman to pulverize and stir the soil in order to minimize evaporation of water. Cross-ploughing was traditionally associated with this kind of tillage. It is therefore of interest to note that traces of cross-ploughing, datable to the Early Bronze Age and perhaps before, have been found in northern Europe.<sup>1</sup>

It is, I believe, generally accepted that the climate of northern Europe deteriorated during the close of the Bronze Age and the Early Iron Age. Our climate changed to what it is today, rather cold and wet and comparatively sunless. Doubtless the change was a very gradual one. But however gradual the change, ultimately it must have had an effect on the technique of ploughing and working the soil. There is evidence that some time during the latter part of the Early Iron Age British farmers realized that a new ploughing technique was necessary. The evidence is, of course, the coulter which made its appearance in Britain then. The coulter may, perhaps, be taken as a sign that a dry-farming technique had come to an end. Its use quite definitely suggests the working of soil with too much moisture in it and too little sunshine playing upon it, so that the ploughman was obliged to cut his soil into slices that could be turned up to the sun and air and drained and worked. The coulter has no function other than to facilitate the cutting of such furrow-slices. How to turn the cut slices over properly was the next problem. We know that this was ultimately solved by fixing a plank, a mould-board, to the side of the plough. One cannot say exactly when this happened, but stages in the development of both mould-board and coulter can, I think, be perceived in the surviving Iron Age and Romano-British material.

To take the coulter first, the pointed stick or fore-share that we noticed on those Early Iron Age Danish ploughs, cutting a little in advance of the main share, contains the germ of the idea of the coulter. What appears to be the earliest example of an iron coulter recorded in northern Europe was found at the Iron Age fort of Bigbury in Kent. Before very long, in the coulters of the Romano-British period, this part had achieved almost its final form.<sup>2</sup>

As I have said, it is not known when the mould-board for turning the cut furrow-slices was devised. It would appear that such a simple and self-evident improvement could not have taken long to suggest itself, particularly

<sup>1</sup> Glob, *Ard and Plough*, p. 123.

<sup>2</sup> *Archaeological Journal*, CIV, 1948, Fig. 3.

when we remember the uneven wear on the wide wooden ploughshares of the Danish Iron Age plough caused by holding the implements aslant. Indeed, it has been claimed by some Danish archaeologists that the developed mould-board was known in Denmark in the Iron Age. The evidence for this consists of parts of three ploughs, these too recovered from bogs in Jutland. One of them has been dated by pollen analysis to an early point in the Sub-Atlantic period; but this dating has been contested.

There are two points to which I wish to refer. First, the soles of these three plough fragments are protected on the land-side by a series of wearing stones of granite, quartzite, and flint driven into holes bored in the wood. These stones exhibit characteristic marks of wear. Now, wearing stones of this kind have been found in some numbers in Yorkshire, Lincolnshire, and southern Scotland. They suggest that yet another early type of plough, and one fitted with a mould-board, was in use here. Unfortunately none of these stones has been found in a datable context.

There is, however, other evidence that the fixed mould-board was in use in Britain in Romano-British times. Some years ago I referred to the fact that some British coulter shows that they were designed for ploughs which turned their furrows consistently to the same side.<sup>1</sup> That this furrow-turning was effected by means of a fixed mould-board need no longer be doubted. I am indebted to Mr A. Aberg for drawing my attention to an asymmetrical winged ploughshare of the Roman period, now in the Folkestone Museum. Such a share can only have been used with a fixed mould-board. Then again, in October 1956, in carrying out an emergency excavation on behalf of the Ministry of Works at the Dinorben hill fort, Abergele, Denbighshire, my colleague, Dr H. N. Savory, found another asymmetrical winged share in a layer containing numerous objects of late Roman and sub-Roman character. This Dinorben share is unusual in that its wing is on the left-hand side (Fig. IV). These two winged shares, which seem to be the earliest so far discovered, confirm in the most satisfying way the evidence deducible from some of the coulters that the fixed mould-board had arrived in the Romano-British period.

I do not suggest that, having been devised, the mould-board plough displaced older types completely. The evidence appears to show that that did not happen. What it does suggest is that during the Iron Age and Romano-British period whatever type of plough, old or new, a farmer used, he followed a new ploughing technique.

I have dwelt at some length on these early ploughs for two reasons. First, they testify to the nature of Bronze Age agricultural technique in northern

<sup>1</sup> *Ibid.*, p. 96.

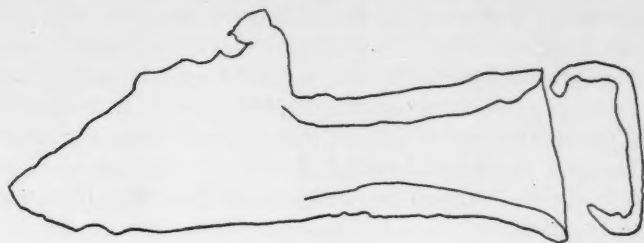


FIG. IV

Ploughshare from Dinorben hill fort.

*By permission of the National Museum of Wales.*

Europe, and, secondly, they exhibit clear evidence of a change in that technique during the Iron Age. They also confirm the botanical evidence for the deterioration of the climate during the Iron Age. Agricultural methods and implements must take account of the climate. It was no accident that the period during which the coulter, the mould-board, and the asymmetrical ploughshare developed is also the one in which the scythe was devised. The scythe was designed to cut grass expeditiously. For a worsening climate increased, or perhaps introduced, the problem of wintering essential livestock and the attendant tasks of haymaking and storing fodder.

Evidence for the development of British ploughs during the Dark Ages and the Middle Ages is scanty. This is less serious, however, now that we have the testimony of the early asymmetrical shares to confirm the other evidence for the use of the fixed mould-board during the Romano-British period. Indeed, little of importance remained to be done to the plough until long after the close of the Middle Ages. There is, in stray finds, in documents, in pictures, evidence of elaboration and improvement in detail. We also find the persistence after many centuries of a symmetrical type of Roman period ploughshare. Such is the share found at Thetford a few years ago and at present in the Castle Museum, Norwich. The share, dated by its excavator at about 900, was at the time thought to be Saxon. I understand that it is now considered to have been the property of Danish immigrants. Whatever its provenance, there are some questions that may safely be asked. Is it indicative of the use, or continued use, in eastern England of a one-way plough with movable mould-board? In other words, has it a place in the story that ends with the turn-wrest ploughs of Kent and Sussex? Or is it a precursor of the wingless 'pike' share, used if and when needed on the normal mould-board plough down to the early nineteenth century?

It was not until the eighteenth century that the next big change in plough

design occurred. The change was not so important as that which began in the Iron Age, for it was not occasioned by a change of climate. It was the less radical change from teams of four, six, or eight slow oxen and clumsy heavy ploughs to the lively two-horse team and lighter plough. But once again, and in spite of the immeasurably greater technical efficiency that eighteen or nineteen hundred years had brought, it took a long time—roughly from 1730 to 1830—for the change to become general. Even then, there were some fertile districts in Kent, Sussex, Gloucestershire, Monmouth, and Glamorgan that clung to ox teams or ancient types of ploughs until late in the nineteenth or early in the present century.

The success of the old traditional ploughs appears to have been bound up with the use of these large teams, particularly those of oxen. Although very powerful, these latter normally moved very slowly, so slowly that the ploughman could keep his plough steady at its right depth and his furrow-slice turning properly. However awkwardly the plough was constructed, whatever tendency it had to run light or dig deeply or let the furrow-slice flop back into the furrow, the ploughman had complete freedom and time to correct it. This, of course, meant severe labour for him. The direction of the team was left to the ox-driver. The ploughman saw to it that a furrow was turned: the ox-driver helped to ensure that it was a straightish one. In the Celtic countries, in order to ensure a slow, steady pace and co-operation with the ploughman, the driver walked backwards in front of the team. He kept his eye on what the plough was doing, he kept his team moving steadily by singing to them. To stop the team he merely stopped singing. During the long period when such teams were communal, the working ploughmen might be supplemented by the owners of the various oxen. In Wales this was ordained by law. After Wales lost its legal system the custom continued as a neighbourly practice. The point I wish to make is, that with several helpers in the field, the ploughman could be helped if either plough or soil were awkward. The help might be given by some one walking alongside and depressing or lifting the plough-beam with a stick. Indeed one might even ride upon the implement to keep it at its depth. There are references to such practices in all parts of these islands.

Worked in the old way, it seems that the traditional local ploughs turned their furrows satisfactorily, until people began to tamper with the plough-teams that for so long had been associated with them. Then the local ploughs came in for a great deal of criticism. Arthur Young was bitter about the Hertfordshire wheel plough, so ill-constructed, he said, that it would not move a yard in its course without the help of the ploughman.<sup>1</sup> Of course it would

<sup>1</sup> *General View of the Agriculture of Hertfordshire*, pp. 36-7.

not: it never had. Like its sister ploughs all over Britain, it demanded that the ploughman should be, unremittingly, the ploughman, and not the team-driver as well. But the eighteenth century wanted to cut down costs, to get rid of the large slow teams and the extra labour. The idea was that the ploughman and two horses should do the job and do it more quickly. It was not, perhaps, a new idea, but it was now invested with a new urgency.

It is not possible to state concisely, and truthfully, what happened to the traditional ox teams between the sixteenth century and the eighteenth. The course of events might differ in neighbouring districts. In some places nothing at all happened. In a few others oxen were almost out of favour already, although the team driver was kept. If a general statement is possible, one may say that the tendency was towards a small team, and that a team of horses. But so far as one can discover, over almost the whole of Britain little was done to adapt the ploughs to being drawn by those smaller but livelier and faster horse teams.

Part of the reason for this may have been that the traditional ploughs were not so uniformly bad as late eighteenth-century enthusiasts for light horse ploughs have suggested. Indeed, there could be so much variety among ploughs of the *same* type that wholesale condemnation of them must have appeared unreal to many who used them. As an example of this one might instance a type once widely used in western Britain, which the present writer has illustrated elsewhere.<sup>1</sup> In general design this type remained unaltered down to the beginning of the nineteenth century, although it could vary in size and detail from one parish to another. This implement as used in a north Cardiganshire parish was illustrated and described about 1750 by Lewis Morris, the antiquary and poet. Morris says that the team consisted of two horses before two oxen, and that in this particular parish the plough was the lightest he had ever seen. Later in the century, the writer of the 1794 county *Report* condemns the ploughs of this particular district as being too heavy!

Although the team had been speeded up by the admission of horses, the plough as depicted by Morris in 1750 is obviously unimproved. The mould-board is merely the lower part of the right-hand stilt widened a little and extended to the foot of the sheath. Such a mould-board could be made to turn the furrow-slice properly if the ploughman exerted himself and had a competent driver controlling a slow team, but not, I think, otherwise. The writer of the county *Report* of 1794 condemns the work done by this implement. In Pembrokeshire the plough was of similar construction. The same alteration had been made to the plough team, and the ploughing incurred the same criticism from the same reporter.

<sup>1</sup> *Antiquity*, xxi, pp. 151-5; *Yr Aradr Gymreig*, pp. 101-15, Figs. 10, 13, and Pl. VII-XII.

In Breconshire this same plough was much used until the end of the eighteenth century. Here, however, there were two things in its favour. First, it was usually drawn by the traditional team. Secondly, it was usually fitted with a better mould-board, so that even with a team of horses it worked satisfactorily. In Glamorgan the same plough similarly improved could be found in the early nineteenth century. There it was usually but not always drawn by the traditional ox team, which survived longer in Glamorgan than anywhere else in Wales. There was no suggestion anywhere that Glamorgan ploughing was defective. The same type of implement, with mould-board improved as in Brecon and Glamorgan, remained in use in Cornwall and Devon for about the same length of time. In these counties it seems to have worked satisfactorily with large teams of either oxen or horses.

In all places where this type of plough persisted the ploughman had to work hard if he was to plough well. The implement had to be held so that it moved through the soil obliquely. The ploughman had neither the time nor the energy to manage the team as well. Indeed, from such evidence as I have seen, it would appear that the factor that made for success with the ancient types was always the large team, which, demanding its own driver, left the ploughman free to wrestle with his plough. Where the team had been altered, or where a child had taken the place of an experienced driver (and this often occurred), the old ploughs were no longer satisfactory without improvement. But improvement, as we have seen, did occur sometimes.

It is probable that detailed study of most ancient types would lead to similar conclusions and would explain why the opinions of one period concerning them are so greatly at variance with those of another. Consider, for example, the Hertfordshire wheel plough. Here is an implement that was commended by Blith in the seventeenth century and by Tull and Hale in the early eighteenth. But Arthur Young in 1804, in a period when it was usually drawn by horses, does not commend it. Under certain conditions, says he, it "wanted a stone of 50 or 60 pounds weight in its body, to keep it steady." It is a heavy, ill-formed, ill-going implement, he says. "It will not move in its work one yard without the ploughman; a proof of its miserable construction." As for the ploughing done with it, "worse work can scarcely be imagined." Similar criticisms are expressed in other county *Reports*: Nottingham, Berkshire, Cambridgeshire, Surrey, Somerset, and so on. Indeed, the similarity of the criticisms is striking: one feels that the surveyors had officially been told what to say and how to say it. There are, however, amusing divergencies of opinion. Some of the surveyors, many of them in fact, advised the adoption of the Rotherham plough, a light implement invented in Yorkshire and patented in 1730. It was capable of being drawn by a pair of horses, and could

be managed without a driver. Yet the *Report* on the West Riding, the home of this particular plough, has nothing very good to say about it. Neither has the *Report* for Durham where this implement was favoured. It is, of course, a fact of agricultural history by now that the champions of the Rotherham were right.

Now all the old types of plough, swing, foot, or wheel, had one constructional feature in common—the chief members of the frame, beam, sole, tail, sheath, formed a rectangle. It was largely the friction set up by the long sole of the old types that made a powerful team necessary. The revolutionary thing that the two inventors of the Rotherham did was to get rid of this long sole entirely. This was done by bringing the left-hand plough-tail forward to the base of the sheath, thereby making a triangular framed plough that occasioned much less friction when being drawn through the soil. Not only was the new type of frame much lighter, it was also much stronger. Also, the old sole or share-beam that had held the ploughshare having disappeared, the ploughshare had now to be fixed on the base of the sheath. In this new position the share could be made to merge into the line of the mould-board, thus further decreasing the friction. But all this did not happen at once. Nevertheless one has only to handle one of the old rectangular-framed ploughs and then take hold of the tails of a Rotherham type swing plough to realize how important was the modification of the frame introduced by Stanyforth and Foljambe at Rotherham in 1730. The immediate benefit conferred upon its user was the ability to handle it with ease. Potentially it was much greater than that; for the first time it made the ideal of a plough that could be drawn by two horses, managed by one man, and work all types of soil, certain of realization. It would seem right, therefore, to consider the Rotherham as the greatest improvement in plough design since late Iron Age or Romano-British times. Nevertheless, it was to take a long time and the improving genius of men like the Scotsman James Small before its full potentialities were realized.

Although the Rotherham was patented in 1730, I think it is true to say that it was getting on for 1820 before most districts could have ploughs of this type that would work under local conditions better than the local types. Even then some heavy clay districts would have nothing to do with them. Furthermore, by the time that most local plough-wrights had adapted the Rotherham to local conditions, the new iron ploughs of the nineteenth century had arrived.

It was a tribute to the soundness of the Rotherham design that the early iron ploughs were closely modelled on it, or on Small's adaptation of it. Fairly soon, however, and inevitably the products of the large implement

firms began to accord more with the nature of the new material. There were, of course, still vast areas of Britain where ploughs continued to be made locally. In many of these in the 1830's and 40's the blacksmith took over the decaying trade of the plough-wright. He often took over in a very real sense, copying in iron and frequently in some detail the local wooden Rotherham. One example that comes to my mind is a Pontsely No. 7 which is now in the Welsh Folk Museum collection. It was made by Josiah Evans, a well-known smith of north Pembrokeshire. On this plough the right-hand stilt still occupies the situation and follows the method of attachment of the comparable stilt on the old wooden ploughs. It is joined to the back of the mould-board as if one of its functions were still to hold the mould-board out against the furrow-slice. The ploughshare, which is of Rotherham type with long side-cap, is of wrought iron in the old tradition. Ransome's brilliant work on cast-iron shares did not mean much to districts like Pontsely; a cast-iron share might last half a day on some of the stony slopes then in cultivation, or it might not. The wooden ancestry of this implement is plainly to be seen although it is made throughout of the more durable material. Durable is the right word, I think, for I found this plough still working in 1937.

This is not an isolated instance of a local, blacksmith-made plough of mid-nineteenth-century type holding its own down to the beginning of the second world war. It was a common occurrence in the hill country. Just as the Rotherham failed to oust the old long ploughs from the clays of Gloucestershire and parts of South Wales, so did the shining and shapely products of the great firms of eastern England fail to dislodge the work of local smiths from some of the hills of the west and north. Alas, by today they are used no more. Not because they were in any way deficient; but because the fields that they subdued and civilized have either gone out of cultivation or have reverted to the waste to become artillery ranges or to be part of the endless, lifeless domain of the Forestry Commission.

## NOTES ON CONTRIBUTORS

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# The Rabbit in England

By ELSPETH M. VEALE

IN view of the two letters which appeared recently in these columns readers may be interested in the following conclusions about the introduction to England of the rabbit. In the course of a study of the medieval fur trade, which has extended over several years, I have collected references to rabbits in the twelfth and thirteenth centuries, and these make possible a more detailed account of the introduction of the animal to England than has hitherto been given.<sup>1</sup> Dr Colin Matheson, in the article in *Antiquity* to which Mr Owen referred in the September number of this REVIEW, was primarily concerned with the distribution of the animal in Wales.<sup>2</sup> He concluded that the rabbits were well established in the small islands, such as those in the Bristol Channel, and in coastal areas on the mainland from at least the late thirteenth century, but that even as recently as 1813 there were comparatively few in the interior. He explained this by suggesting that the rabbits' original haunts were the sandy soils near the sea coast which favoured their burrowing, and that the animal could more securely establish itself on islands that were too small to support the larger beasts of prey, its natural enemies, which were so numerous in the Middle Ages. The evidence relating to England suggests that the pattern of distribution as described by Dr Matheson for Wales was not unlike that in England. It seems probable that the rabbit became established in the late twelfth century on the small islands off the English coast; that in the middle years of the thirteenth century coneygarths were being more widely set up on the mainland, but that even late in the century rabbits were to be found only on certain estates. By the early fourteenth century, although owners of warrens still valued them highly and frequently haled poachers before the law, rabbits seem to have been more numerous, and the earliest trace of what was later to become a profitable export trade in their skins can be found in the export of 200 skins from Hull in 1305.<sup>3</sup>

The two earliest references to rabbits in England that I have found are already known to readers of this correspondence. They come from the late

<sup>1</sup> G. E. H. Barrett-Hamilton, M. A. C. Hinton, *History of British Mammals*, 1912, pp. 180-96; J. Ritchie, *The Influence of Man on Animal Life in Scotland*, 1920, pp. 247-54; *Cambridge Economic History of Europe*, I, p. 168; Thorold Rogers, *History of Agriculture and Prices in England*, I, pp. 340-1. See also letters in *The Times* in April and May 1936.

<sup>2</sup> C. Matheson, 'The Rabbit and the Hare in Wales', *Antiquity*, xv, 1941, pp. 371-81.

<sup>3</sup> P.R.O., Exchequer K. R. Customs Accounts, E122:55:19. See also *Cal. Pat. Rolls*, 1334-8, p. 435.

twelfth and very early thirteenth century, and both instances concern rabbits on islands.<sup>1</sup> In 1176 there were rabbits in the Scilly Isles, where Richard de Wyka granted to the abbey of Tavistock his tithe *de cuniculis*, "which for some time I had unlawfully withheld, believing that tithes were not payable on things of this sort."<sup>2</sup> At some time between 1183 and 1219 the tenant of Lundy Island was entitled to take fifty rabbits a year from certain *chovis* (coves?) on the island.<sup>3</sup> Evidence also survives as to the existence of rabbits in the early thirteenth century on the Isle of Wight, where in 1225 there was a *custod' cuniculorum* in the manor of Bowcombe, Carisbrook, then held by the earls of Devon.<sup>4</sup> It is an interesting and significant fact that there are thirteenth-century references to the payment of tithes in rabbits on each of these three islands, and so far no other references to such tithes have come to light for the early period.<sup>5</sup> Other evidence from the early thirteenth century does not permit of very certain interpretation. The earliest rabbit bones so far discovered in England may date from the late twelfth century or the first two decades of the thirteenth. These were found in the midden at Rayleigh Castle, Essex, and identified by Martin A. C. Hinton, Keeper of Zoology at

<sup>1</sup> Two other possible twelfth-century references have been found: (1) A word listed as *coneieia* in the *Medieval Latin Word List* under *cunicularium* and dated 1199 proves to be a misreading of Coveleia, in the Forest of Shotover: i.e. Cowley, Oxon.—*Rot. Chart.*, i, p. 2b. Cf. *Cal. Charter Rolls*, i, p. 5. (2) A grant by a Walter de Vautort of Drake's Island (St Nicholas Island), Plymouth, *cum cuniculis*, to Plympton Priory. This was dated "about 1135" by H. G. Hurrell, 'Fourth Report on Mammals', *Trans. Devonshire Assoc.*, LXXXV, 1953, p. 228. There seems to be no evidence at all to support this dating. Information about the grant is derived from a statement by Leland, who gave no date for it and who has been correctly quoted by later historians of Plympton Priory and of Plymouth: J. Leland, *Itinerary in England and Wales*, ed. L. Toulmin Smith, i, p. 215; W. Dugdale, *Monasticon*, vi, p. 51; R. N. Worth, *History of Plymouth*, 1890, p. 23; C. W. Bracken, *History of Plymouth*, 1934, p. 16. Nor has it proved possible to identify Leland's Walterus de Valletorta. The Rev. W. M. M. Picken, an expert on the feudal history of Devon and Cornwall, knows of no one of this name among the Vautort lords of Trematon or among those who were lords of the Maker-Sutton-Tamerton member of the Trematon honour. Mr Finberg has very kindly allowed me to use this information, collected by him in the course of a correspondence initiated by Dr Matheson.

<sup>2</sup> H. P. R. Finberg, 'Some Early Tavistock Charters', *Eng. Hist. Review*, LXII, 1947, p. 365.

<sup>3</sup> Exeter City Archives, Misc. Deeds, D.614. A translation of this deed was printed by J. R. Chanter, 'History of Lundy Island', *Trans. Devonshire Assoc.*, iv, 1870-1, p. 574. It is accurate except in one respect: the number of rabbits should be 50, not 100, information which I owe to the kindness of Professor Carus-Wilson. The deed is undated, but limits can be fixed from internal evidence: E. St John Brooks, 'The Family of Marisco', *Journal Royal Soc. Antiquaries of Ireland*, LXI, 1931, p. 32, notes 45, 46.

<sup>4</sup> P.R.O., Exchequer, Foreign Roll 8 Henry III, E364: i, f. 2d. I am indebted to Mr Finberg for suggesting this source to me.

<sup>5</sup> *Cal. Liberate Rolls*, 1240-5, p. 228; *Cal. Inquisitions Misc.*, i, p. 538, no. 1994. According to Selden, tithes were payable on beasts of the forest, but he gives no instances of the payment of tithes in rabbits: J. Selden, *Historie of Tithes*, 1618, pp. 445, 298-368, 414-48.

the British Museum (Natural History).<sup>1</sup> The castle, built soon after the Conquest, was part of the escheat of Henry of Essex and was in royal hands from 1163 to 1215, when John granted the honour to Hubert de Burgh.<sup>2</sup> It seems probable that the castle itself fell into disrepair some time during the first quarter of the thirteenth century, and was no longer occupied after about 1220. The building was repaired in 1183-4 but it was not mentioned in the grant of 1215; by 1230 Hubert was building himself a new castle at Hadleigh close by, and by 1277 cattle were grazing on the site of the castle at Rayleigh.<sup>3</sup> Possibly the rabbits once eaten there had come from the islands just off the Essex coast, such as Foulness or smaller ones like Wallasey, which were manors in the Honour of Rayleigh.<sup>4</sup> In 1221 6,000 rabbit skins were mentioned in a Devon plea.<sup>5</sup> They may have been English skins as it seems probable that rabbits were established on the mainland in the south-western counties at an early date, but they may equally well have been of foreign origin as Spanish rabbit skins were regularly imported to England in the thirteenth century, and the large quantities involved lead me to prefer this alternative. There were, too, many grants of warren made at this time. But only seldom, unfortunately, do grants of warren of any period specify which animals were to be reserved to the owner. Certain charters and cases of trespass reveal that the hare and fox were the chief beasts of the warren, at least in the twelfth and early thirteenth centuries.<sup>6</sup> No case of trespass involving the rabbit has been traced before 1268, in which year Richard, earl of Cornwall and king of Almain, complained that his coney warren at Isleworth, Middlesex, had been broken into.<sup>7</sup> Only where a coneygarth is specifically mentioned may the existence of rabbits be assumed with certainty. The earliest reference found in the British Isles to rights in *warennis et cunigariis* appears in a charter granting lands in Connaught to Hugh de Lacy in 1204.<sup>8</sup> The actual existence of a coneygarth in England on the mainland has not been

<sup>1</sup> E. B. Francis, 'Rayleigh Castle', *Trans. Essex Arch. Soc.*, new series, XII, 1913, p. 184; M. A. C. Hinton, 'On the Remains of Vertebrate Animals found in the Middens of Rayleigh Castle', *Essex Naturalist*, XVII, 1912-13, pp. 16-21. See also M. Hinton's letter to *The Times*, 28 May 1936.

<sup>2</sup> *Rot. Litt. Pat.*, I, p. 153.

<sup>3</sup> E. B. Francis, *op. cit.*, pp. 150-2; *Cal. Pat. Rolls*, 1225-32, p. 417.

<sup>4</sup> F. M. Powicke, *King Henry III and the Lord Edward*, p. 766, note 2.

<sup>5</sup> *Curia Regis Rolls*, I, p. 249.

<sup>6</sup> G. J. Turner, *Select Pleas of the Forest*, Selden Society, XIII, pp. cxxiii-cxxix; *Cal. Charter Rolls*, I, pp. 74, 108, 129, 130, 142, 169, 423.

<sup>7</sup> *Cal. Pat. Rolls*, 1266-72, p. 285.

<sup>8</sup> *Rot. Chartarum*, I, p. 139. This does not necessarily imply that Hugh had at that time a coneygarth on his Connaught lands, for the wording of a charter was often common form.

confirmed until 1241, when the king ordered hay to be carted from his *cuningera* at Guildford.<sup>1</sup>

It is possible, however, to be certain that there were rabbits on the mainland from 1235 onwards. In that year the king presented as a gift *decem cuninos vivos* from his park at Guildford, and in 1242 he sent men there to catch thirty or forty rabbits *secundum quod invenerint prefatam cuneram fertilem*.<sup>2</sup> These low figures suggest a fairly recently established colony, and Henry III does not appear to have had any other coneygarths at this time. Scattered throughout the Liberate Rolls from 1226 onwards are the orders he sent out for the supply of venison, boars, fish, swans, peacocks, hens, eggs, and hares for his various feasts.<sup>3</sup> Yet not until preparing for his feast at Christmas 1240 did he order a supply of rabbits. Although orders for provisions were then sent to the sheriffs of eleven southern and eastern counties, the bailiffs of three towns, the keepers of the bishopric of Winchester, then vacant, and one of the king's escheators, rabbits were included in only three cases: 100 were to be supplied from the lands of the bishopric of Winchester, 200 from those of the earl of Warenne, and 200 by the king's escheator.<sup>4</sup> In 1241 the sheriffs of Hampshire, Sussex, Surrey, and Kent were to produce 100, 50, 100, and 500 respectively.<sup>5</sup> In 1243 180 rabbits were required from the estates of the bishop of Winchester, 100 coming from the Isle of Wight, and 300 from those of the archbishop of Canterbury; 300 were to come from the lands of the bishop of Chichester in 1244 and 200 in 1245.<sup>6</sup> Similar orders were going to the sheriffs of Essex, Hertfordshire, and Middlesex in 1248, and to those of Buckinghamshire and Bedfordshire in 1249.<sup>7</sup> The coneygarth belonging to the manor of Kempston, Bedfordshire, held by the earl of Chester, is referred to as early as 1254.<sup>8</sup>

The possibility that the critical period in the spread of the rabbit on the mainland was from about 1230 to 1250 is strengthened by some interesting evidence about the stocking of warrens. In 1241 the keepers of the bishopric of Winchester were ordered to take 100 rabbits within the bishopric where it could most conveniently be done and take them alive to Sugwas, the manor of the bishop of Hereford, for his use.<sup>9</sup> In the same year the keepers of the lands of the bishopric of London supplied the king's uncle, Peter of Savoy, with eighty live rabbits from Clacton, Essex, for his warren at Cheshunt,<sup>10</sup> and

<sup>1</sup> *Close Rolls*, 1237-42, p. 381.

<sup>2</sup> *Close Rolls*, 1234-7, p. 217; *ibid.*, 1237-42, p. 390.

<sup>3</sup> e.g. *Cal. Liberate Rolls*, 1225-40, pp. 8, 9, 191-3, 247-8, 262, 354, 358-9, 390-1, 431, 435.

<sup>4</sup> *Ibid.*, 1240-5, pp. 11-12.

<sup>5</sup> *Ibid.*, pp. 95-6.

<sup>6</sup> *Ibid.*, pp. 196, 197, 280, 289.

<sup>7</sup> *Ibid.*, 1245-51, pp. 201, 251.

<sup>8</sup> *Cal. of Documents relating to Scotland*, I, p. 369, no. 1958.

<sup>9</sup> *Cal. Liberate Rolls*, 1240-5, p. 54. <sup>10</sup> *Ibid.*, p. 89.

by 1244 the king himself had begun to stock his park at Windsor. The sheriff of Surrey sent some rabbits from Guildford; the keepers of the bishopric of Chichester and the earl of Derby produced others, those coming from the earl's warrens being apparently sent all the way from Stamford.<sup>1</sup> The earl of Aumale sent some to the royal park at Nottingham at the same time, and these seem to have come from Lincolnshire, unless they had been dispatched across the Humber from the coneygarth on the Holderness estates.<sup>2</sup> This particular delicacy must in fact soon have become a favourite dish on the tables of the great, and it is interesting to put the query who was responsible. Can it be that a man like Peter des Roches, bishop of Winchester, accustomed to eating rabbits in his native Poitou, encouraged their establishment on the English mainland? The rabbit may by the thirteenth century have penetrated far into France from its original home in Spain. In classical times it had spread to the islands of the western Mediterranean and during the first century B.C. it was a newcomer to Italy.<sup>3</sup> Although, writing towards the end of the thirteenth century, Peter de Crescentiis of Bologna, in his *Opus Ruralium Commodorum*, considered that its distribution was limited to Spain, Lombardy, and Provence, there seems little reason to doubt that the animal was more generally known in France and that it was from France that it eventually reached England.<sup>4</sup>

Rabbits were very expensive during the late thirteenth and fourteenth centuries, a sufficient indication of their relative scarcity. They must then have been limited to certain localities, and owners guarded their warrens with jealous care.<sup>5</sup> Rabbits cost four or five times as much as chickens and must have been considered a luxury. In 1270 on a Cambridge estate rabbits were worth 5d. each, and even a century later for a feast held at Merton College, Oxford, in 1395, rabbits were bought at 6d. and 8d. a couple and transported, at the cost of ½d. each, from Bushey to Oxford.<sup>6</sup> Their spread seems, however, to have been encouraged, although even as early as 1254-7 the burgesses of Dunster, Somerset, had recognized their destructive habits.<sup>7</sup> By the fifteenth century they were more plentiful, although considerable variations in price suggest that even then they were not easily obtainable every-

<sup>1</sup> *Ibid.*, pp. 251, 255.

<sup>2</sup> *Ibid.*, p. 255; *Close Rolls*, 1259-61, p. 97. This coneygarth was included in a list of the earl's lands made in 1260.

<sup>3</sup> *Cambridge Economic History of Europe*, I, p. 168; Barrett-Hamilton and Hinton, *op. cit.*, pp. 178-84.

<sup>4</sup> P. de Crescentiis, *Opus Ruralium Commodorum*, 1471, f. 170 d.

<sup>5</sup> e.g. *Cal. Pat. Rolls*, 1327-30, pp. 157, 208, 209, 335, 429, 568.

<sup>6</sup> Thorold Rogers, *op. cit.*, II, pp. 558, 559, 644, 646.

<sup>7</sup> Ballard and Tait, *British Borough Charters*, 1216-1307, p. 107.

where. While rabbit skins on Lundy Island were valued in 1275 at 5½d. a dozen, they were being bought elsewhere at prices averaging 1s. 1½d. a dozen in 1310, 1312, and 1313.<sup>1</sup> The countess of Warwick was buying them at 1s. 4d. a dozen in 1405, but throughout the middle years of the fifteenth century the cellarer at Syon Abbey was selling them regularly at 4d. a dozen.<sup>2</sup> Thorold Rogers suggested that the comparatively small rise in the price of rabbits after 1540 might be explained by their increasing numbers: average prices rose from 5d. to only 7¾d. a couple.<sup>3</sup> By 1555 the great Swiss naturalist Conrad Gesner could write: "There are few countries wherein coneys do not breed, but the most plenty of all is in England."<sup>4</sup> Then rabbit skins were a not insignificant item in our export trade, and Richard Hakluyt pointed out that the export of black coney skins might well be increased, "for that we abound in the commoditie and may spare it."<sup>5</sup> No doubt many a farmer would still echo his views today.

<sup>1</sup> *Cal. Inquisitions Misc.*, I, p. 298, no. 979; Thorold Rogers, *op. cit.*, I, p. 583.

<sup>2</sup> *Ibid.*, III, p. 545; IV, p. 582; Syon Abbey, Ministers' Accounts, Cellarers' Accounts, 1447-60, 1511-23. I owe this information to the abstracts made for the Beveridge Price History.

<sup>3</sup> Rogers, *op. cit.*, IV, pp. 345, 346-55.

<sup>4</sup> C. Gesner, *Historia Animalium*, translated by E. Topsell, London, 1607, p. 110.

<sup>5</sup> R. Hakluyt, *The Principal Navigations of the English People*, III, p. 273.

## Notes and Comments

### THE BRITISH AGRICULTURAL HISTORY SOCIETY

The fifth Conference and Annual General Meeting of the Society was held at Wills Hall, the University of Bristol, on Thursday the 11th and Friday the 12th of April 1957. Some thirty-five members of the Society attended. The Thursday evening was devoted to two papers on the Berkeley Estates which members visited the next day. Dr H. Hilton, Lecturer in History, the University of Birmingham, spoke on the Berkeley estates in the medieval period and Mr Francis Peter, former agent at Berkeley, gave their more recent history. On the Friday morning there was a paper by Dr Dawe, Provincial Agricultural Economist, University of Bristol, on the recent agricultural history of the Bristol

Province. He was followed by Dr Axel Steensberg, Keeper of the Danish Folk Museum and Lecturer in Cultural History, University of Copenhagen, who read a paper on his recent experiments in neolithic agriculture and also showed a film of the work. The Society was privileged to welcome Dr Steensberg as its guest for the meeting. In the afternoon the members of the Conference visited Berkeley Castle where they were conducted round by Mr Peter and Mr H. J. Baldwin, the present agent.

In the unavoidable absence of the President and the Chairman of the Executive Committee the Chair at the Annual General Meeting was taken by the Treasurer, Professor Edgar Thomas. The retiring officers

(continued on page 103)

# Some Notes on Shepherds' Staves

By L. F. SALZMAN

IT is probable that most people if asked to draw a picture of a medieval shepherd might be rather hazy about details of his costume, but would have no hesitation in equipping him with the typical shepherd's crook, associated with Dresden shepherdeses and found in most Folk Museums. I have examined many scores of representations of shepherds in illuminated manuscripts, paintings, and carvings and have so far found only three, or possibly four, English and one French instances of such crooks before about 1475: to these instances I shall return later.

Shepherds were not common subjects for classical artists, and the few examples that I have found seem to carry nothing more functional than a plain stick. In Christian art they occur frequently in scenes of the Nativity either greeted by the angel in the fields or in adoration at the crib; David, and more rarely Abel, are portrayed as shepherds; and there are occasional pastoral scenes. Two books which contain a number of relevant illustrations are *Les Noëls de France* by Maurice Vloberg (Grenoble, 1934), and *Noël! Noël!* by Henri Ghéon (Flammarion, 1935).

In Byzantine art, and generally before about 1200, the shepherd carries either a plain long staff or a club. Examples of the plain staff may be seen in a Reichenau MS. of the beginning of the eleventh century (Boeckler, *Deutsche Buchmalerei Vorgotischer Zeit*, pl. 36), and in a French MS. slightly later in that century (Vloberg, p. 181). In the well-known group of shepherds on the porch of Chartres Cathedral (c. 1200) the shepherd playing on the pipes carries a twisted club. An earlier twelfth-century German MS. shows a shepherd with a club (Boeckler, pl. 57) and a contemporary German ivory carving in the Victoria and Albert Museum (*V. & A. Christmas Picture Book*, 4) has three shepherds, each with a club, presumably more for

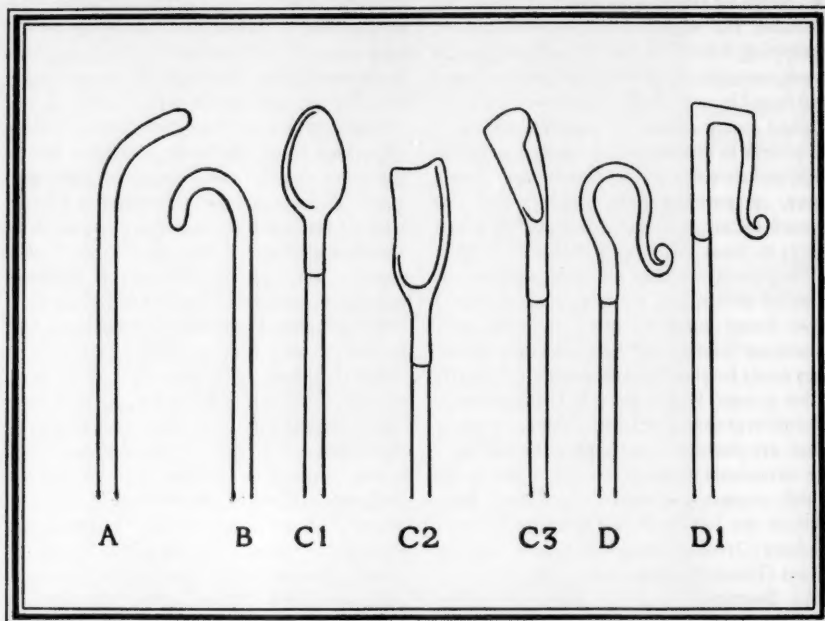
defence than for control of the sheep. The *Hortus Deliciarum* of Herrad von Landsberg, c. 1175, has an interesting variation, the thinner upper end of the club being curved into a sort of embryo crook (pl. 23, 24); this is too small to be functional as a crook and is possibly for attachment to the belt.

The formless club developed into the type (A) which I call the 'hockey-stick', which is the commonest variety between 1200 and 1400. The earliest definite example of this which I know is in two scenes from the life of David in an English MS. of c. 1150 (*Bibliographica*, iv, pl. 1). David is similarly equipped in a series of scenes (pl. 161-76) in *Old Testament Illustrations* (Roxburghe Club) from a MS. of c. 1250 in the Pierpont Morgan Collection, and again in a MS. of c. 1295 (Couderc, *MSS. du Moyen Age*, pl. 34). Other thirteenth-century examples occur in one of the windows of Chartres Cathedral and in the mural painting at Cocking Church, Sussex (Johnstone, *Creative Art in Britain*, 87). My use of the term 'hockey-stick' is justified by a remarkable illustration (pl. 7) in *Queen Mary's Psalter*, of c. 1300. Here Cain and Abel are both shown, unscripturally, as herds; each carries a stick of this type and Abel is holding up a ball, while the accompanying inscription says that they play in their leisure with their 'crosses' and balls (*De crozces et de pelotes se entre iuent a festes*). Another miniature in the same MS. (pl. 162) shows the shepherds of the Nativity with a variant of the type, shortened so as more to resemble a golf club (cf. Ghéon, 17 and 24). This type occurs also in an early fifteenth-century French MS. in the Bodleian (Douce 102; reproduced as a Christmas card). On the other hand the type is occasionally developed into the open crook (B) resembling the handle of a walking-stick. This is not common, but there is one example in the

Antiphoner of Beaupré, c. 1290 (100 MSS. of Henry Yates Thompson, vi., 21), and another in a MS. of the late fifteenth century in the British Museum (Egerton MS. 2045, fol. 82).

The hockey-stick type continued into the early fifteenth century (e.g. G. H. de Loo, *Heures de Milan*, pl. 6), and is even found in an

Amiens (Vloberg, p. 38). This type is shown in a German marble carving of 1638 (*V. & A. A Second Christmas Picture Book*, pl. 9) and as late as 1701 in an illustration to Hoogstraten's *Phaedrus* (Amsterdam). From about 1425 the straight scoop holds the field. It would be tedious to list examples, but reference may be made to the Nativity scene



eighteenth-century ivory carving of a shepherd from Goa (Portuguese) in the Victoria and Albert Museum. But from about 1325 almost every shepherd is shown carrying the *houlette*—there appears to be no English word for it. This is a long straight staff with an iron spud at one end, which may take the shape of a spoon (C1), a straight scoop (C2), or a scoop set at an angle (C3). The three shapes were contemporary and merged into one another. On the whole the earliest examples tend to the spoon (e.g. Stettler, *Swiss Stained Glass*, pl. vi: c. 1360), which often has much the appearance of a spear—as in the sixteenth-century choir stalls at

in the Grimani Breviary (c. 1480) and two in Winkler, *Die Flämische Buchmalerei* (pl. 51 and 75). The angle-spud occurs as early as c. 1340 in the Hours of Jeanne, Queen of Navarre (100 MSS. of Henry Yates Thompson, i, 20) and is found down to the sixteenth century, a good example being in the lovely Nativity at Autun (Joan Evans, *Art in Mediaeval France*, pl. 100). This last, seen in profile, suggests a golf 'iron'; and indeed the shepherds are shown in a fifteenth-century MS. as playing a primitive type of golf with their *houlettes* (Vloberg, p. 135).

The purpose of these spuds long puzzled me, and I could only assume that they were

for digging up roots that were either good or bad for the sheep. But on referring the matter to my friend Herr Koppold of Munich, he told me that he had not seen the shepherd's crook in use in Bavaria, but that the shepherd walks behind his flock and, if a sheep begins to stray, he digs up a divot with his spud and throws it outside the sheep to drive it back to the flock. This is borne out by Littré's *Dictionnaire*: "HOULETTE—Bâton que porte le berger, et au bout duquel est une plaque de fer en forme de gouttière, qui sert pour lancer des mottes de terre aux moutons qui s'écartent et de la sorte les faire revenir." Herr Koppold also called my attention to a passage in Pepys's Diary, where he records how in July 1667 he met a shepherd on Epsom Down "and I tried to cast stones with his horne crooke."

The Epsom shepherd's crook would have been of the type shown in the illustrations to "The Shepherd's Calendar" of 1579 (reproduced in Green's *Hist. of the English People*, pp. 849-54). This retained the spud at one end but had at the other end the fully developed 'leg-crook' (D). This type of double-purpose staff is very prominent in a series of French Books of Hours printed about 1498 (*Bibliographica*, XII, 462-8): it also appears in a contemporary tapestry (Elek, *French Tapestry*, pl. 26). A variant with a crook of rectangular design (D1) is found on some Tournai tapestries of pastoral scenes in the South Kensington Museum (one reproduced in *Masterpieces in the V. & A.*, pl. 95; cf. Elek, pl. 53).

Curiously enough, the leg-crook, although so rarely illustrated before about 1500, was known much earlier in England. On two misericords, the carved brackets under stall seats, one in Gloucester Cathedral and the other in the chapel of Winchester College, a shepherd is shown carrying such a crook; both are of the second half of the fourteenth century. Also dating from about 1350 is the probably English MS. (Egerton MS. 1894) reproduced by M. James, *Illustrations of Genesis* (Roxburghe Club), in which is shown (pl. 13) a shepherd standing beside his hut—

a movable hut on wheels—and holding such a crook. To about the same date belongs a possible fourth English example. This is a Nativity from the series of paintings formerly in St Stephen's Chapel at Westminster. In this one of the shepherds has a similar crook; unfortunately the picture is only known from a copy and one cannot be quite certain that it is accurate; it is noteworthy that another of the shepherds has the hockey-stick type. So far as France is concerned, the only early example that I have found is in a MS. of c. 1410—the *Livre de Marveilles*, illustrating the voyages of Marco Polo and other eastern travellers. Here (vol. I, pl. 53) King Dor is shown guarding the herds—sheep, swine, and cattle—of Prester John and holding a staff with the fully developed crook, and without a spud. In the same MS. a view, theoretically in Persia, shows a shepherd with a spoon-staff (vol. II, pl. 198), which is also carried by one in a Nativity scene (pl. 243).

At present I have failed to find any example of the leg-crook east of the Rhine. In each of the Academy Summer Exhibitions of Dutch and of Flemish Art there were five or six shepherd pictures, but in none was there a crook. Even in the Van Dyck portrait of Lord George Stuart, where the catalogue described him as "in Arcadian costume, holding a crook," what he holds is the straight *houlette*. In Italy at all periods, so far as I can ascertain, shepherds always carry a simple straight staff: a very good example is the Lombard wood carving, sixteenth century, of the Nativity in *V. & A. Second Christmas Book*, pl. 14. The only definite instance of even an *houlette* that I have found in an alleged Italian painting is in one "attributed to Tibaldi" (c. 1550) in the Ashmolean Museum (no. 431).

Of documentary evidence I have none. Although I have read a great many medieval and later farming accounts and inventories, I have never met a reference to the shepherd's staff or crook; nor do writers such as Walter of Henley mention it. It is a subject which appears to have attracted no attention; but I

hope that these notes which I have put together may induce some one to go more fully into it.

There remains the relation between the shepherd's functional staff and the 'pastoral

staff' used by prelates of the Church. But if I started to stray in that direction the editor of the AGRICULTURAL HISTORY REVIEW would justifiably cast a divot, or half-brick, to turn me back to the flock.

## Letters to the Editor

ARTHUR YOUNG

SIR,—Can any of your readers help me find the manuscript of Arthur Young's Autobiography?

Yours faithfully,

R. BEACH THOMAS

*Gustard Wood,  
Wheathampstead, Herts.*

### SHOOTING ON HILL PASTURES

SIR,—Your correspondent, Sir Hugh Rhys-Rankin, has to some extent put the cart before the horse. In Scotland, the fallacy has long been upheld (and still is) that the interests of shooting ousted the sheep and with them many humans, leading to another bout of the well-known 'clearances'. In fact the slump in the sheep (and cattle) prices was already reducing the sheepflocks and causing some of the shepherds to emigrate, or to return to their Border homeland where the ideal conditions have always made sheep-rearing a more economical proposition than in the Highlands. (Incidentally, it is a fact not mentioned, so far as I know, by any Scottish agrarian historian that there has never been an indigenous tradition of shepherding in the Highlands of Scotland, according to the standards developed by the Border shepherds.) When the slump came these skilled men gradually left. Doubtless they were glad to do so, for the Highlanders did not like them; in many areas their coming had been a symbol of an earlier 'clearance'. The sheep that remained were left to the Highlanders' primitive methods of shepherding, based upon the ancient tending of a small number of mixed stock constantly

under the eye of some member of the community. This state of affairs is directly responsible for the appallingly low quality of sheep and shepherds today in the less favoured areas of the Western Highlands and Hebrides. To return to the main point, however; the sheep were already going out at the time when a new class, suitably armed to perform in an ancient and respectable sport, were appearing in large numbers upon the scene. In many cases the opportunity was grasped to convert land that was no longer profitable into 'moor' or 'forest'. The conversion gave rise to further, though local and minor, social upheavals, which in turn gave rise, among those not able to see the whole thing in historical perspective, to the belief that shooting drove the sheep off the hill. The main point that I wish to make is that the change was inevitable. The conditions were ripe inasmuch as the firearms and the people to use them were both being 'made' in large numbers, and the modern scientific methods of sheep husbandry, which might yet have enabled the hill-sheep to hold its own in the face of some opposition, had not been developed. There are other reasons which cannot be gone into here; only in recent years, when social and legislative changes have become potent factors, could the outcome be different. The cause, therefore, of the drop in sheep numbers "since 1870" was not the shooting interests alone, but a coincidence of factors arising from the social and economic changes of the time.

Yours, etc.,

R. A. KENNEDY

# Work in Progress

Compiled by JOAN THIRSK

The following list does not lay claim to completeness. It has been compiled from the particulars given in response to a letter circulated to universities, local history societies, and local record offices. It is hoped to publish similar lists from time to time, and the compiler will therefore be glad to receive any information concerning changes of subject and omissions from this list.

ABERG, F. A., *Museum of English Rural Life, 7 Shinfield Road, Reading, Berkshire.*

Roman agriculture and settlement in the Hampshire area.

ADAMS, R. H., *c/o Isle of Wight River Board, Engineer's Dept., County Hall Annexe, High Street, Newport, Isle of Wight.*

Bibliography of land drainage, irrigation, reclamation of marsh, fen, and tidal lands, and warping in Great Britain and Ireland.

AGATE, R. G., *12 Wilton Grove, Wimbledon, S.W.19.*

The Surrey evidence bearing on the causes, nature, and consequences of the rioting and disturbances in certain agricultural areas in the winter of 1830-1.

AGERSKOW, Miss MARGARET, *Department of Geography, Leeds University.*

The reclamation of Knaresborough Forest (Leeds M.A. thesis).

ALLISON, KEITH J., *Leeds University.*

Sheep farming and Norfolk agriculture, 1450-1700.

ATTWOOD, E. A., *Department of Agricultural Economics, University College of Wales, Aberystwyth.*

The rate of change in the structure of British agriculture, 1870-1914.

BARLEY, M. W., *Department of Extra-mural Studies, Nottingham University.*

Rural housing.

BARNES, F. A., *Department of Geography, Nottingham University.*

A historical and regional geography of Anglesey (London Ph.D. thesis).

The Economic Geography of the Milk Industry of England and Wales after 1860.

BARRETT, JOHN, *Clarence Lodge, Hampton Court, Surrey.*

Food and its adulteration in the nineteenth century (London Ph.D. thesis).

BATLEY, Mrs L., *Department of Latin, Sheffield University.*

Eighteenth-century manorial history of Sheffield, Rotherham, and district.

BEAUMONT, Miss OLGA, *Reading University.*

Seventeenth-century probate inventories for certain west Midland areas.

BEAVINGTON, F., *39 Snow Hill, Maulden, Bedford.*

A general study of market gardening in eastern and central Bedfordshire.

BERESFORD, MAURICE W., *Department of Economics and Commerce, Leeds University.*

Pre-Parliamentary enclosure, 1597-1750.

BIRCH, J. W., *Department of Geography, Bristol University.*

The economic geography of the Isle of Man, with reference to the stages in its development since 1800.

BOAL, F. W., *Department of Geography, The Queen's University, Belfast.*

The 1847 Crop Returns in Northern Ireland.

Land Use and Rural Settlement in co. Down.

BONHAM-CARTER, VICTOR, *Broomball, East Anstey, Tiverton, Devon.*

The history of the Dartington Hall Estate, Totnes, Devon, since 1925.

BOUCH, Canon C. M. L., *Clifton Rectory, near Penrith, Cumberland* (in collaboration with JONES, Professor G. P.).

A general social and economic history of the Lake Counties from Tudor times to the nineteenth century.

BUCHANAN, R. H., *Department of Geography, The Queen's University, Belfast.*

Changes in agriculture and settlement in co. Down during the eighteenth and nineteenth centuries.

The 1801 Crop Returns in Northern Ireland.

BUCHANAN, R. H., and PROUDFOOT, V. B., *Department of Geography, The Queen's University, Belfast.*

The history and present status of Conacre in Ireland.

BUCHANAN, R. H., and JOHNSON, J. H., and PROUDFOOT, V. B.

An archaeological investigation into the development of the pattern of Irish settlement from the first millennium A.D. to the eighteenth century.

BUNTING, BRIAN, 9 *Aldam Road, Totley Rise, Sheffield.*

Danish agriculture: a revaluation.

BURKE, T., *Department of Geography, Birmingham University.*

A geographical study of population changes in County Cork since c. 1750.

BURLEY, K. H., *London School of Economics and Political Science, London, W.C. 2.*

Economic and social history of Essex under the later Stuarts (London Ph.D. thesis).

CAIRD, J. B., *Department of Geography, Glasgow University.*

The development of settlement in selected regions of the Highlands and Islands of Scotland.

CHAPMAN, Mrs VERA, see RODGERS, W. B.

CHEW, Miss H., *Department of Geography, Liverpool University.*

Agricultural changes in England and Wales during the last two decades.

COATES, BRYAN E., *Department of Geography, Leeds University.*

A study of the contribution made by parks to the evolution of the landscape of Yorkshire (Leeds M.A. thesis).

COLLINS, Miss JOAN, *Department of Geography, Birkbeck College, London.*

Some aspects of rural settlement in Berkshire.

COPPOCK, J. T., *Department of Geography, University College, London.*

Some aspects of the agricultural geography of the Chilterns, 1866-1951.

Changes in farm size in Buckinghamshire, 1865-1941.

DAVIES, Mrs C. S., *Durness, Robin Lane, Sutton, Macclesfield, Cheshire.*

The history of the manor of Withington, Manchester. Enclosure of the open fields and common.

DIGBY, ALAN, *Department of Geography, Leeds University.*

The evolution of land use and settlement in Upper Ribblesdale since late medieval times (M.A. thesis).

DODD, J. PHILIP, *Hampton Loade, Alveley, Bridgnorth, Shropshire.*

Agriculture of the West Midlands in the nineteenth century.

Agriculture during the Napoleonic Wars in Yorkshire, Lancashire, and the Midlands.

Shropshire agriculture in the nineteenth century.

- DOUCH, ROBERT, *Institute of Education, Southampton University*.  
Some aspects of the history of agriculture in the Isle of Portland, Dorset.  
Bibliography of the local history of Hampshire and the Isle of Wight.
- DURY, G., *Department of Geography, Birkbeck College, London*.  
Agriculture and land use in the Channel Islands in the late eighteenth century.
- ELLIOTT, G. G., *Department of Geography, Liverpool University*.  
The development of the agrarian landscape in Cumberland, 1600-1800.
- EMERY, FRANK, *Department of Geography, University College of Swansea*.  
West Glamorgan farming, c. 1580-1620.  
Agrarian change in Gower, 1500 onwards.  
"Georgical" work in this country, 1650-1750.
- EVANS, PROFESSOR E. ESTYN, *Department of Geography, The Queen's University, Belfast*.  
The import of improved agricultural implements and techniques from England to Ireland.
- EYRE, S. R., *Department of Geography, Leeds University*.  
The limits of improved land and common pasture in N. Derbyshire from medieval times.
- FARMER, D. L., *Exeter College, Oxford*.  
An examination of price fluctuations in certain articles in the twelfth, thirteenth, and early fourteenth centuries.  
The Duchy of Cornwall estates in 1337.  
Anglo-Saxon charter boundaries.
- FARRA, MISS M., *Department of Geography, Bedford College, London*.  
The reclamation of the North Yorkshire moors.
- FLETCHER, T. W., *Department of Agricultural Economics, Manchester University*.  
The agriculture of Lancashire, 1750-1850.  
The Great Depression, 1875-1900.
- FORSTER, GORDON C. F., *School of History, Leeds University*.  
The progress of enclosure in Yorkshire, 1500-1850.  
County administration in seventeenth-century Yorkshire.
- FOX, MRS H. M., 13 Park Road, Beckenham, Kent.  
Anglo-Saxon agriculture (Cambridge Ph.D. thesis).
- FREEMAN, T. W., *Department of Geography, Manchester University*.  
Pre-famine Ireland: a study in historical geography.
- FULLER, MARGARET D., *Museum of English Rural Life, 7 Shinfield Road, Reading, Berkshire*.  
West of England friendly societies in the eighteenth and nineteenth centuries with particular reference to their insignia.
- FUSSELL, G. E., 55 York Road, Sudbury, Suffolk.  
The influence of the Low Countries on English farming.
- GILES, B. D., *Department of Geography, Birmingham University*.  
Land-use studies for certain Worcestershire parishes, based on enclosure-map and tithe-map evidence.
- GOULD, JOHN, *Department of Adult Education, Leicester University*.  
The influence of fluctuations of harvest yields on the level of economic activity in the sixteenth to eighteenth centuries.
- GRANT, MRS B. F., 78 Twyford Avenue, London, W.3.  
History of Wensleydale, Yorkshire.

- GREEN, GEORGE, *School of Agriculture, University of Nottingham, Sutton Bonington, near Loughborough, Leicestershire.*  
Leicestershire villages in settlement, expansion, and decay.
- GREENFIELD, Miss M., *S.W. Essex Technical College, Walthamstow, London, E.17.*  
Geographical development (including land utilization) of Essex coastal towns (London Ph.D. thesis).
- GRIEVE, Miss H. E. P., *Essex Record Office, County Hall, Chelmsford.*  
Essex (1953) Flood Report including full treatment of its agricultural aspects with introductory historical background.
- HABAKKUK, Professor H. J., *All Souls College, Oxford.*  
English aristocracy and gentry in the seventeenth and eighteenth centuries.
- HALLAM, H. E., 41 *Arthur Street, Loughborough, Leicestershire.*  
The medieval fenland.
- HALLAM, Mrs S. J., 41 *Arthur Street, Loughborough, Leicestershire.*  
The Romano-British fenland.
- HANKINSON, F., *Department of Geography, Birkbeck College, London.*  
Agricultural geography of south-west Kent.
- HARRIS, A., *Department of Geography, Hull University.*  
Agricultural history, with particular reference to changes in land use, of the East Riding of Yorkshire, 1550-1850.  
A comparative study of the Vale of Pickering and the North Yorkshire moors.
- HAVINDEN, MICHAEL, *Magdalen College, Oxford.*  
Oxfordshire farming in the seventeenth century.
- HENDERSON, H. C. K., *Department of Geography, Birkbeck College, London.*  
The 1801 crop returns.
- HIGGS, JOHN W. Y., *Museum of English Rural Life, 7 Shinfield Road, Reading, Berkshire.*  
Farm implements and equipment.
- HILTON, RODNEY, *School of History, Birmingham University.*  
Agrarian conditions in the later Middle Ages, with special attention to the West Midlands.
- HOLMES, J. H., *c/o Essex Record Office, County Hall, Chelmsford.*  
Rural poverty in Essex and the increase of population, 1750-1830.
- HOPKINS, M. W., *Department of Geography, Birkbeck College, London.*  
The Lea Valley glasshouse industry.
- HOPKINS, P. G. H., *Tutor-Organizer, Joint Committee for Adult Education, Southampton University.*  
The rise and fall of water-meadow irrigation in Britain.
- HUGHES, MARK, *Balliol College, Oxford.*  
Landownership in Durham, 1790-1850.
- HUNT, T. J., *Orchard End, Pyrland, Taunton, Somerset.*  
History of the manor of Taunton in the thirteenth century, chiefly from the Pipe Rolls of the Bishopric of Winchester.
- JASPAN, M. A., *Exeter College, Oxford.*  
Family and rural community in North Devon—a study in rural depopulation and social mobility (Oxford D. Phil.).
- JENKINS, J. G., *Museum of English Rural Life, 7 Shinfield Road, Reading, Berkshire.*  
The evolution and regional characteristics of the four-wheeled wagon.

- JOHN, A. H., *London School of Economics and Political Science, London, W.C. 2.*  
The prices of animal products in England, 1700-1850.
- JOHNSON, J. H., *Department of Geography, University College, London.*  
The historical geography of County Londonderry in the nineteenth century.  
*See also* BUCHANAN, R. H., JOHNSON, J. H., and PROUDFOOT, V. B.
- JOHNSON, S. A., *Department of Geography, Liverpool University.*  
Enclosure and the agrarian landscape in Lindsey.
- JONES, Miss E. I. M., *Department of Geography, Bedford College, London.*  
The reclamation of the Bagshot Heaths.
- JONES, Professor G. P., *Department of Economics, Sheffield University.*  
The population of Cumberland and Westmorland, sixteenth to eighteenth centuries.  
*See also* BOUCH, Canon C. M. L.
- JONES, GLANVILLE R. J., *Department of Geography, Leeds University.*  
Land settlement, tenure, and colonization in the Colwyn-Clwyd district of North Wales.
- JONES, T. I. JEFFREYS, *Coleg Harlech, Llys Branwen, Harlech, Merioneth.*  
Index to a Calendar of Welsh Laws, 1715-1901.  
Agriculture in Glamorgan in the sixteenth century.  
Agrarian history of Wales, 1700-1900, with special reference to the enclosure movement.
- KENYON, G. H., *Iron Pear Tree Farm, Kirdford, near Billingshurst, Sussex.*  
Farming from c. 1600 on the Weald Clay of Sussex.
- KERNTHALER, E. A., *84 Bramley Way, Ashted, Surrey.*  
Farm rents and the size of properties in Surrey (Ph.D. thesis).
- KERRIDGE, ERIC, *Deva, Hooton Road, Willaston, Wirral, Cheshire.*  
English agrarian history in the sixteenth, seventeenth, and eighteenth centuries.
- KIDDLE, D. F. A., *Department of Geography, Birkbeck College, London.*  
The changing landscape of north-west Middlesex.
- KINVIG, Professor R. H., *Department of Geography, Sheffield University.*  
Agricultural geography of the West Midlands.
- KIRK, M., *Department of Geography, Leeds University.*  
The social and economic structure of Sutton-on-Forest (N. Yorks.) in the sixteenth and seventeenth centuries.
- KOERNER, R. M., *Department of Geography, Sheffield University.*  
Recent changes in land-use in the South Yorkshire coalfield.
- LANGTON, Miss E., *Department of Geography, Bedford College, London.*  
Reclamation of the heath and common of the Cromer moraine.
- LAWTON, R., *Department of Geography, Liverpool University.*  
Population changes and population migrations in nineteenth-century England.
- LONG, W. HARWOOD, *Department of Agriculture, Leeds University.*  
Yorkshire farming in the sixteenth and seventeenth centuries.
- LONGMAN, J. FORD, *Department of Geography, Birkbeck College, London.*  
Studies in the settlement geography of Hertfordshire.
- MACKENZIE, H. R., *Department of Geography, Aberdeen University.*  
Geographical aspects of transport in northern Scotland.
- MACPHERSON, ARCHIBALD, *Department of Geography, Edinburgh University.*  
Land utilization in the Dee valley.

- MARTIN, J. M., *School of History, Birmingham University*.  
Changes in landownership, land utilization, and agricultural income in the West Midlands, 1785-1825 (M.A. thesis).
- MATHIAS, PETER, *Queen's College, Cambridge*.  
The brewing industry in the eighteenth century: barley, hops, and malt.
- MCCORD, NORMAN, *Department of Modern History, King's College, Newcastle upon Tyne*.  
The activities and organization of the Anti-Corn Law League, 1838-46.
- MCGREGOR, O. R., *Department of Social Studies, Bedford College, London*.  
History of modern British agriculture and rural society, 1800 to the present day.  
English land tenure and agricultural progress, 1832-83.  
Finance of land drainage in the nineteenth century.
- McHUGH, B. J., *Department of Geography, The Queen's University, Belfast*.  
Land Use and Rural Settlement in co. Tyrone and co. Fermanagh.
- McKAY, J. A., *Department of Geography, Birkbeck College, London*.  
The population geography of Banffshire.
- MEAD, W. R., *Department of Geography, University College, London*.  
Hedgerows and field boundaries.
- METCALFE, B. M., *Department of Geography, Leeds University*.  
The reclamation and development of Hatfield Chase.
- MILLS, DENNIS R., *Department of Geography, Manchester University*.  
Land Use and Settlement in Kesteven, c. 1700-c. 1850 (Nottingham M.A. thesis).
- MILLS, F. D., *Department of Agricultural Economics, Reading University*.  
National Union of Agricultural Workers—a Study of Trade Union Organization in British Agriculture.
- MINCHINTON, WALTER, *Department of History, University College of Swansea*.  
The 1795 and 1800 crop returns for Wales.
- MINGAY, GORDON, *London School of Economics and Political Science, London, W.C. 2*.  
Landownership and agrarian trends in the eighteenth century, based on the Duke of Kingston's estates.
- MINTON, Miss J. G., *Fairbourne, Rose Valley, Brentwood, Essex*.  
The Petre family lands in the Wid basin of Essex and adjacent areas, 1539-1939 (London M.Sc. thesis).
- MONTEITH, Mrs D., 62 *High Street, Saffron Walden, Essex*.  
Settlement and field patterns in N.W. Essex, eleventh to twentieth centuries (London M.A. thesis).
- MOORE, D. C., *Trinity College, Cambridge*.  
The position of the English farmer in its economic, social, and political aspects, c. 1850-75.
- NEWLYN, Miss ANNE, *Department of Agricultural Economics, Reading University*.  
The village and manor of Coleshill, Berkshire, 1500-1700.
- OLDFIELD, F., *Department of Geography, Liverpool University*.  
Physical evolution and reclamation of Mossland.
- OLIVER, J., *Department of Geography, University College of Swansea*.  
Climate and farming in Anglesey in the first part of the eighteenth century.
- OSCHINSKY, DOROTHEA, *Department of History, Liverpool University*.  
Didactic literature on estate management and farming in the Middle Ages.

- PAWSON, Professor H. C., *University School of Agriculture, Durham University*.  
The history of the Cockle Park Experiment.
- PELHAM, R. A., *The Court House, West Meon, Hampshire*.  
Agricultural geography of the fourteenth and eighteenth centuries.
- PERKIN, H. J., *Department of History, Manchester University*.  
Land reform movements in nineteenth-century Britain.
- PETTIT, PHILIP, *Magdalen College, Oxford*.  
Oxfordshire farming in the seventeenth century.
- PLUMMER, B. A. G., *Department of Geography, University College of Swansea*.  
An investigation into human influences on marsh development in the Burry estuary, South Wales.
- POSTAN, Professor M. M., *Peterhouse, Cambridge*.  
The agrarian economy in the Middle Ages.
- PRINCE, H. C., *Department of Geography, University College, London*.  
Parkland in the Chilterns, 1600-1900.
- PROUDFOOT, V. B., *see* BUCHANAN, R. H.
- RAEBURN, JOHN R., *London School of Economics and Political Science, London, W.C. 2*.  
Responses of British agriculture to price and cost changes since 1870.
- REVILL, S., 85 *Bedale Road, Nottingham*.  
Fourteenth-century court roll of Mansfield, Notts.
- REYNOLDS, B., *Institute of Historical Research, Senate House, London, W.C. 1*.  
The late medieval geography of Dorset (London M.A. thesis).
- RHYS-RANKIN, Capt. Sir HUGH, *Green Lane, Bryngwyn, via Kington, Herefordshire*.  
Welsh cattle droving during the turnpike era from west and central Wales to England.
- RILEY, K. C., *Department of Geography, Birkbeck College, London*.  
Settlement patterns and population distribution in Shropshire.
- RODGERS, W. B., *and* CHAPMAN, Mrs VERA, *and others, Department of Geography, Manchester University*.  
Development of farming during the nineteenth century in the parish of Lymm, Cheshire.
- ROTHWELL, Professor H., *Southampton University*.  
The Estates of St Swithun's Priory, Winchester.
- ROWE, JOHN, *Department of Modern History, Liverpool University*.  
Cornish agricultural history in the nineteenth century.
- RUTHERFORD, S., *Department of Geography, Birkbeck College, London*.  
Agricultural geography of north-west Kent.
- RYDER, M. L., *Fernville, 68 Ash Road, Headingley, Leeds 6*.  
The origin, domestication, and history of sheep.
- SENIOR, M. W., *Department of Geography, Leeds University*.  
The development of the land utilization pattern in Assynt parish and in Barra.
- SHAW, DAVID H., 28 *Brantwood Road, Luton, Bedfordshire*.  
Surviving dialect in six villages in south Bedfordshire.
- SHEPPARD, Miss J. A., *Department of Geography, Queen Mary College, London*.  
The draining of the marshlands of East Yorkshire.  
Rural settlement in East Yorkshire.
- SHORTER, A. H., *Department of Geography, University of Exeter*.  
Field patterns in England.

- SIMPSON, E. S., *Department of Geography, Liverpool University*.  
The nineteenth-century agrarian history of the Cheshire dairying region.  
Agrarian development in the Wem district of North Shropshire.
- SKINNER, J. G., *Department of Geography, Birkbeck College, London*.  
Essex agriculture in the nineteenth century.
- SMEE, Miss D. K., *Department of Geography, Bedford College, London*.  
Soil and slope, and ridge and furrow in a Northamptonshire parish.
- STITT, F. B., *Staffordshire County Record Office, County Offices, Stafford*.  
Some medieval accounts of Lenton Priory.
- STURMAN, Mother MARY WINIFRIDE, *St Angela's Ursuline Convent, Forest Gate, London, E.7*.  
Administration of the Barking Abbey estates (London Ph.D. thesis).
- SWALES, T. H., *The Jolly Farmers, Yaxham Road, Dereham, Norfolk*.  
The agrarian development of Norfolk, c. 1530-c. 1660 (Sheffield Ph.D. thesis).
- SYLVESTER, Miss DOROTHY, *Department of Geography, Manchester University*.  
The open fields of Cheshire.  
The rural landscape of the Welsh Borderland.
- THIRSK, Mrs JOAN, *Department of English Local History, Leicester University*.  
The agrarian history of England in the sixteenth century.
- THOMAS, E., 46 Washington Road, Maldon, Essex.  
The operation of the Poor Law, and labour migration in Essex, Berkshire, and Oxfordshire.
- THOMPSON, F. M. L., *Department of History, University College, London*.  
Nineteenth-century English landed estates.  
Wiltshire agriculture, 1870-1955.
- THORPE, Miss SYBIL, *St Hilda's College, Oxford*.  
Leicestershire monastic lands.
- TIMMS, J. W., *St Catherine's Society, Oxford*.  
Hodge and the parson: a study of the farm worker and the clergy in the West of England, 1850-1914.
- VOLLANS, Miss ELEANOR C., *Department of Geography, Bedford College, London*.  
Agriculture in the Chilterns in the late Middle Ages.
- VOSE, E. K., *School of History, Birmingham University*.  
The administration and economic development of the estates of Worcester Priory (Birmingham Ph.D. thesis).
- WALKER, Miss F. R., *Department of Agricultural Economics, Manchester University*.  
Home-produced and imported supplies of food since 1820.
- WATERS, G. H. C., *Department of Geography, Reading University*.  
Strip lynchets in the Highland zone of Britain, especially in the Yorkshire Pennines.
- WESTCOTT, Miss MARGARET R., *Department of History, Exeter University*.  
The estates of the Courtenay family in the fifteenth and early sixteenth centuries (Exeter M.A. thesis).
- WHITTINGTON, G. W., *Department of Geography, Reading University*.  
Strip lynchets in the Lowland zone of England, especially in the south of England.
- WILSON, C. P. H., *Peddar's Way, East Wretham, Thetford, Norfolk*.  
A short history of the peach, and a treatise on its cultivation as a bush tree in the orchard and garden, together with an anthology.

WITNEY, D., *Department of Economics, The Edinburgh and East of Scotland College of Agriculture, Edinburgh.*

Scotland's agricultural economy, 1857-1957.

WRAY, Miss J. H., *School of History, Birmingham University.*

The Warwickshire Hundred Rolls of 1279 (Birmingham M.A. thesis).

YOUD, G., *Department of Geography, Liverpool University.*

Enclosure and the changing agrarian landscape in Lancashire.

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#### NOTES AND COMMENTS (*continued from page 90*)

were re-elected and Dr R. H. Hilton, Mr W. E. Minchinton, and Mr F. G. Payne were returned unopposed to the Executive Committee in place of Mr G. E. Fussell, Capt. E. N. Griffith, and Mr Alexander Hay who had retired.

In presenting the report of the Executive Committee the Treasurer said that the membership of the Society stood at four hundred and sixty-four against four hundred and ten the previous year but he pointed out that although the financial position was not unsatisfactory more members still were needed as publishing costs continued to rise.

In presenting the Treasurer's Report Professor Thomas pointed out that the

Society's books showed a loss of £57 18s. 6d. for the year ending 31 January 1957 and that the balance at that date was £168 13s. 1d.

At a meeting of the Executive Committee held later in the day Mr George Ordish was elected Chairman.

#### FUTURE CONFERENCES

The One-Day joint Conference with the Association of Agriculture will be held at the Institute of Education, University of London, on Saturday, 7 December 1957.

The Annual General Meeting and Conference for 1958 will be held at the West Riding Institute of Agriculture, Askham Bryan, York, on Thursday, 11 and Friday, 12 April 1958.

## Book Reviews

E. A. KOSMINSKY, *Studies in the Agrarian History of England in the Thirteenth Century*. Basil Blackwell, 1956. xxviii+370 pp. 37s. 6d.

This is not a new book, but a new edition of the *Studies* that Professor Kosminsky published in Russian ten years ago. It is presented now with a preface in which the author replies briefly to Professor Postan's criticisms of the first edition, and an editorial introduction which seeks to introduce to English readers not the author, who is well known, but "the background of the Soviet medievalists." This background is peopled by the figures of Marx, Lenin, and Stalin. None of these was as well acquainted as Professor Kosminsky is with medieval England, but all three command his respect as exponents of human affairs. This fact, which may automatically recommend the book to some English readers, will probably dismay many more.

As a marxist Professor Kosminsky is concerned with the conflicts within English society in the thirteenth century, and particularly with the struggle to exact or withhold "feudal rent"—the fruits of that part of a peasant's labour which was not devoted either directly or indirectly to keeping him alive. As "the traditional organization for the appropriation of feudal rent is . . . the manor," the non-marxist might be forgiven for regarding the book as primarily an account of the manor in its diversity. There is striking evidence of that diversity here, for some of the forms in which the manor appears have only the name in common. No one is better equipped than Professor Kosminsky to revise this nomenclature, borrowed by the historian from the lawyer, but it has not yet been revised, and he is forced here into the procrustean habits that its use entails.

Most of the evidence for this study comes from the Hundred Rolls, which cover a territory—the south-east Midlands and Cambridgeshire—in which are many of the great estates from which the classical theory of the

manor has been derived. It is also, as Professor Kosminsky shows, an area in which anomalies abound, as they commonly do when theories are applied to the accidents of human life. In the past the great estates have attracted much attention because their administration created a mass of documents, many of which have survived to inform the historian. The small estate, usually managed in the owner's head, is likely to escape the notice of the modern as of the medieval theorist. As the Hundred Rolls set out to describe all free holdings, large and small, they are potentially valuable as a corrective to the evidence surviving in private archives, and Professor Kosminsky has studied them intensively. After a useful description of their origin and contents, he proceeds to a lengthy, quasi-statistical analysis of the holdings that they describe. This analysis is ingenious and impressive, but its value is open to question. The author is at pains to point out the shortcomings, both inherent and acquired, of his material. He adduces other evidence to compensate for these deficiencies, from such sources as inquisitions post mortem and ministers' accounts, but these he also shows to be unreliable in a number of ways. Having raised these objections, he then treats his figures as though after all they were suitable for statistical manipulation. It is true that some of the conclusions are of a very general kind, and hardly need statistical demonstration. It is not surprising, for example, to learn that villein tenements are small on the smaller manors, and that the cottar is most prominent on the smallest estates. The villein needed a tenement large enough to keep his family alive, if he himself was to be free to work on the demesne. There must always have been an acreage below which the usefulness of a manorial demesne would be impaired if a full allocation of land were made to villein tenants. This fact is not plainly alluded to until p. 314. But points of this kind can be made without elaborate statistical

analysis; discussions of incidence, distribution, and so forth cannot be divorced from strictly accountable evidence, and such evidence seems to me to be lacking here.

This kind of criticism might be extended to the rest of the book, valuable as some of its contents are. If the reader cannot accept its dialectical method, he is bound to grudge the time that is spent in developing the argument. There is a good deal here that is interesting, but also much that is arid. There are twelve pages in which the peasant's budget is discussed, and other writers' conclusions reviewed. Most of the time the individual is overshadowed when classes are discussed; here for a moment he emerges, and a sorry figure he cuts: "the main body of the English peasantry . . . were . . . a middle peasantry crushed by feudal exploitation" (p. 240). But it may be noted that Professor Kosminsky, in reconstructing a typical budget, is unable to take account of a family's earnings in rural industry, which must quite often have helped to keep body and soul together. In general, indeed, his comments on industry are rather vague. On the other hand, some of those on trade are too precise: who else would say (p. 322) "The number of towns . . . at the time of Domesday amounted to 80"? And the remark on p. 326 that "it is quite clear that the sea trade passed exclusively through King's Lynn, Sandwich, Hull, and London" either does not mean what it says or is mistaken.

It can no longer be said with confidence that the free peasantry of the Danelaw was "a direct result of the Danish military colonization," but this is a reminder of the difficulties attending the publication of such a book as this. The difficulties of translation are also in evidence. Here we have such alien and bizarre expressions as (p. 208) "Critique of Theory of I. I. Granat," and (p. 301) "The Two Aspects of the Labour of the Cottar." These are prominent as headings, and there are other oddities in the text. Where reading of this kind is not compulsory it is unlikely to be read at all.

GEOFFREY MARTIN

CHRISTOPHER TRENT, *The Changing Face of England*. London, Phoenix House, 1956. 244 pp. 21s.

This book is "intended to help readers trace in the open air the influences which have changed the face of our country," and by this yardstick it must be judged. It would be no service to the reader whom Mr Trent obviously has in mind, the serious and observant amateur, to recommend this book, particularly since Dr Hoskins's *Making of the English Landscape* covered exactly the same ground a year ago. That book had clarity of style, novelty of local illustration, and an experienced awareness of the needs of adults who are keen to explore the historical landscape. What of Mr Trent?

He has the virtues of zeal, sincerity, and energy. His style may not irritate all readers, so let that pass. Novelty? this is confined to forty new photographs by the author, the fruit of his own journeys, and the best part of the book. Other illustrations are less happy: the aerial view of the open fields of Crimsote, well known since its use by the Orwins in 1938, is said to show fields "Celtic or earlier." The open-field map which matches the photograph exactly could have been seen at the Warwick County Record Office. A "contemporary print" (p. 156) purports to show an early nineteenth-century landscape near Princes Risborough. But the print is no guide at all to the landscape of its day. The artist puts in a house or two to suggest a village and a hedge or two for the countryside. On this scale (the two Risboroughs an inch apart, in real life three-quarters of a mile) the artist had neither the intention nor the ability to show the real divisions of the landscape.

Efficient and persuasive exposition? The failure of the book to help its readers is most dismal in the final chapter, "Exploring Your Own District." Anyone who thinks this review stony-hearted should read these eleven pages or the trite eight-page chapter, "A Glimpse of the Future." Large parts of the rest of the book fail to assist the reader simply because of the absence of map illus-

trations or of references to maps. Unless a reader has been where Mr Trent has been, the citation of places and views is meaningless.

What if Mr Trent's readers want to follow up the matter? The bibliography is odd. Domesday Book is at the head as "a principal source-book," but both adjective and noun must be employed in some unusual sense? The reading advised has some startling omissions and some highly individual inclusions. Who would have thought that Arthur Bryant's *Age of Elegance* would have been in and yet no recommendation of the Orwins, Sir Cyril Fox, or Darby's *Domesday Geography* (citing only three absentees)? or that an author who (from pp. 156-60) seems to have read Dr Hoskins should omit to recommend him? or that it was necessary to mention two volumes of *The Oxford History of England* as "standard works but not specially illustrative of the Changing Face (*sic*)"? or that Miss Elizabeth Levett's *Studies* should be sought in a catalogue under Arthur?

A conflation of other people's works ("I am indebted probably to a far greater degree than I realize") is only worth while if it enlivens the reader by some superior vision or a more effective assembly of detail. What of detail? The word "feudal" is misused throughout; the Cottage Act (31 Eliz. cap. 7) is misunderstood (it was to prevent the mushroom growth of shelters for the poor and not the close-building of village houses, as a simple reading of the Act would have shown); the Statute of Merton did not leave the issue of "sufficient pasture" to lords of manors, but—as abundant printed records show—to local juries; wheat was exported as a surplus long before the "early part of the nineteenth century;" in short, Mr Trent is too near the state of an amateur himself to be able to help others, and if he is to have anything new or helpful to say it will only be after he has had some acquaintance with record offices, the publications of local record societies, manuscript estate-plans, and printed county- and town-maps. Of all these the reader is left

ignorant. In default, it must always be a case of the *Guide* leading the guide.

M. W. BERESFORD

H. C. DARBY, *The Draining of the Fens*. Cambridge University Press, Second Edition, 1956. 314 pp. 35s.

The new edition of this book differs little from the first edition. There are a few fresh entries in the bibliography and a brief summary of post-war developments in the last chapter. The new edition is slimmer and more comely than the 1940 edition.

The need for a comprehensive history of the Drainage of the Fenland is great, but Professor Darby's book does not satisfy it. He has given us a mere catalogue of events without any real explanation of their causes. Brute facts are of no interest in themselves, but only for the answers which they allow historians to give to certain important problems. In a book which is one of a series devoted to studies in economic history the reader naturally expects to find reference to problems in which economic historians are interested. What *was* the drainage of the fens and when did it happen? Who were the drainers and why did the fenlanders so hate them? Was the ancient sewers' organization really working as badly as the propagandists declared? What land was flooded and for how long? How does the drainage of the fens relate to the agrarian problems of the day? What part did the process play in the animosities which led to the Civil War? Such questions, and many more, the historian of the Fenland must try to answer, and until research has settled the answers to at least some of them no general summary of the history of fenland drainage is possible.

The history of fen drainage will be the fruit of many years' painful labour upon the extensive documentation which survives. There are, for example, the copious sewers' records of the Spalding, Boston, and Spilsby Courts of Sewers, in the Lincolnshire Archives Office and the County Hall, Boston, the Cambridgeshire sewers' records at Wisbech Museum, the archives of the Spalding

Gentlemen's Society, the Banks Papers, and multitudinous parochial and manorial records, besides the great collections in the Public Record Office and the British Museum.

Two other points call for notice. First, the Bedford Level is not the Fenland, but only about two-fifths of the Fenland. Any book which ignores modern drainage works in Lincolnshire is bound to give an inadequate account of fen drainage. The *Draining of the Fens* devotes only 56 out of 261 pages of narrative to the Lincolnshire Fenland. The bias is clearly seen in the last, amended, chapter, where Professor Darby considers drainage schemes of the future. He devotes all his space to the schemes of the Great Ouse Catchment Board and does not tell his readers that the other catchment boards also have schemes and that the latest drainage work completed since 1947 is the Coronation Channel at Spalding and the widening of the Welland.

Secondly, the writer perpetuates the myth that the Fenland lay waste until the seventeenth century. The great period of fen drainage was the twelfth and early thirteenth centuries, when the fenlanders enclosed nearly 200 square miles of siltland and fen-edges and converted it into arable and meadow. Closer attention to recent work on the Fenland, especially to that of Dr Joan Thirsk, would have led to complete revision of the first two chapters of this book. Such a revised version would not have settled the economic history of the sixteenth-century Fenland for good, but it could have shown what problems there are to solve.

H. E. HALLAM

E. DUNSDORFS, *The Australian Wheat-Growing Industry, 1788-1948*. Melbourne University Press, 1956. xii+546 pp. £2 15s. 6d. Part I of this large book contains a historical account of the development of wheat production and trade in Australia from the arrival of the first convicts, with their attendant Governor, warders, and army families, to the problems of the immediate post-war

years. In Part II, Dr Dunsdorfs expounds with the help of all available statistics the relationships between the various trends shown over these 150 years: market prices and area under wheat, changes in yield, changes in costs of producing wheat, rural population and wheat production, the importance of wheat-growing in the national economy. The two parts taken together contain everything that the economic historian could want to know on this subject. When so much has been provided, it may seem ungenerous to ask for more, but one reader at least would gladly have sacrificed all the logarithmic charts (a pernicious invention of the statisticians) for a series of black-and-white maps showing soil types, rainfall, temperature, even State boundaries and railways. The geographical setting of Dr Dunsdorfs's story seems inadequately staged. And secondly, Dr Dunsdorfs is in places inclined to rear a mighty statistical edifice on what appear to be shaky foundations, and especially so when he gaily establishes "the" cost of wheat production, or the total of profits and losses obtained from wheat production, in the whole of Australia. The fact that his table on p. 425 proves conclusively that from 1914 to 1941 wheat growers had lost over £200 millions in growing wheat confirms my suspicions of agricultural accounts as supplied by farmers to Royal Commissions or laboriously assembled by economic historians.

EDITH H. WHETHAM

W. M. WILLIAMS, *The Sociology of an English Village: Gosforth*. Routledge and Kegan Paul, 1956. x+242 pp. 25s.

Rural sociology has been almost wholly neglected in this country, except by the novelists of the soil. Mr Williams, a trained social anthropologist, sets out to remedy this neglect to some degree by making an intensive study of one rural parish and the changes that have taken place over the last fifty to one hundred years within its boundaries.

How does one select a single parish for study in this way? Mr Williams chose north-western England as his region (for reasons

that are not revealed), and within that region west Cumberland; and within the region he found that Gosforth was the parish which satisfied his other criteria. It was a reasonable size in population; it was sufficiently remote from the acids of modernity, which have tended to dissolve so much of rural England into a rather nondescript mass; it has a long history; and it contains both a village and a wide area of scattered farms.

The civil parish of Gosforth covers eleven square miles on the western fringe of the Lakeland Fells, and is about two miles from the coast at its nearest point. Nearly two-thirds of the population live in the village, and the remainder in dispersed farms and cottages. Over two-thirds of the householders were born in the parish or within ten miles of it: there are several people in Gosforth whose families have lived there for four centuries or longer, so that "many cultural features of considerable antiquity have survived until the present day."

After more than two centuries of relative stability, the population of Gosforth began to rise about 1810, reached a maximum about 1870, and has since declined steadily to about half the size it was eighty years ago. The village itself has increased in size since 1870; the decline is seen in the dispersed farmhouses and cottages, many of which are now used only for barns and byres, while others are just heaps of rubble on the ground. This in itself is a profoundly important cultural change.

Mr Williams's ten chapters are concerned with the economy of the parish, the Family, Kinship, and Social Classes; with that good old sociological standby—"Some Aspects of the Life Cycle"—with Neighbours, Community, Religion, and with 'Gosforth and the Outside World'. There are eight appendices on various subjects, all worthy of study, and many pages of valuable and entertaining notes on the sources and the text. *The Sociology of an English Village* has already been widely reviewed and praised as a notable contribution to rural sociology in England. It can be read with profit by all who are interested in the English village and

what has happened to it over the last hundred years. One wishes there were many more studies equally good for other distinctive regions of this country.

Mr Williams was only just in time at Gosforth. The Atomic Energy Commission is already on the doorstep. "All in all, every development that has taken place in parish affairs in recent years has emphasized and reflected an urban way of life in various ways. Against this the traditional way of life is static and can offer nothing to replace the loss in community feeling which is a result of these developments. The social structure, an inheritance from the past, was not designed for a world where every individual is conceived of as a highly mobile unit, and does not seem capable of adaptation to suit this concept. If the present change continues to its logical conclusion, then the sociologist of fifty years hence may well find it difficult to distinguish Gosforth from any other rural parish in England."

I am not competent to discuss Mr Williams's book as a sociologist, but much that he says is valuable to the historian and it is on these aspects that I should like to offer a few comments in this review. So much of sociology as written seems to me, speaking as an amateur enquirer seeking enlightenment, to consist of windy abstractions: a great deal of what everybody knows already, and lengthy discussions of the trivial and the obvious. Most sociological textbooks could profitably be reduced to one-third their present length. Few of them attempt any discussion in depth: that is, over a considerable stretch of time. Surely the historical method is indispensable to the real sociologist. Without it his conclusions are bound to be jejune and superficial.

Mr Williams stands out as a sociologist of sense. He has used the parish records and other local sources extensively and so given "an historical background to the sociological analysis." This alone would make his study notable. The study of the pattern of land-ownership and occupation, for example, draws upon the glebe terrier of 1778, the

enclosure award of 1815, and certain literary sources (there is apparently no tithe award). The chapters on the Family and on Kinship make use of the parish registers, which begin in 1571; and the cartulary of St Bees is drawn upon repeatedly.

I venture to suggest, however, that his chapters on the Family and on Kinship would have gained greatly if he had also used some of the central records in the Public Record Office. The fuller hearth-tax assessments of the period 1662-74, for instance, are invaluable for showing the structure and ramifications of rural families especially, the existence of extraordinary groups of the same family name, and very often the wide economic range covered by a single family name in the same generation. In one large Midland village in 1670, the 161 households in the hearth-tax assessment represented eighty-two different family names; but within the framework of this commonplace observation one finds two families with no fewer than eight branches in the village (in one instance all the branches had been thrown out within the preceding ninety years), and three other families with six branches each. Many other families had three, four, and five branches in the village. A Leicestershire woman once said to me that when she got married, some forty years ago, she immediately became related, through her husband, to every other family in the village.

Mr Williams could have made even better use of the parish register than he has done. For most parishes this reveals whole dynasties of peasant families, intermarrying closely on their own economic levels, so that the degree of inter-relationship in the seventeenth-century village, for instance, is nearly incalculable. These are facts of high importance to the historian as well as the sociologist, for in this enormous blood-brotherhood lay the greatest strength of the peasant community in the face of external economic and social change.

A systematic examination of the parish registers, the wills, and the tax assessments for Gosforth in the second half of the seven-

teenth century would have produced a wonderful picture of the kinship of a rural parish at that date, while life was still relatively static (or was it? what degree of family mobility was there even then?). Over a longer period a similar study of the sources would have yielded, for all the imperfections of some of the documents, some valuable material on the longevity of families in the chosen parish. What proportion, for instance, lasted a hundred years at Gosforth? How many lasted for two hundred years, and so on? What kind of peasant stayed the longest—the bigger man, the middling man, or the smallholder; the freeholder, or the copyholder? Was there greater mobility in some centuries than in others? How and when did the 'dispossessed' arise as a class in a remote rural society? Is it connected with the growth of population on a relatively fixed supply of land? All these questions, and many others, seem to me to be fundamental to sociology as well as to history, although Mr Williams might reasonably object that some of them go farther back than he was prepared to go in this book. But I cannot see, for example, that he has used the census schedules for 1841 and 1851, which are preserved in the Public Record Office, to construct a picture of kinship in his parish a hundred years ago, a picture which might well have been very revealing as to the extent of change even in this remote parish during the past century.

A sociologist trained in the use of historical sources could produce a first-class study of an English parish, or small town for that matter, for the period between the early sixteenth century and the present day. Such a study might well tie up at its edges with the examination of house-types over the same period, which one is glad to know that Mr Williams has already done for Gosforth, and will shortly publish elsewhere. For example, did the older generation retire into a 'parlour' in the farmhouse when their working days were over, or were they housed in a separate cottage? What is the meaning of the 'double farmhouses' one comes across in Dorset and possibly elsewhere also?

There exists a considerable territory on the frontier between history and sociology which few have yet touched, let alone explored, with the notable exception of Professor Homans in his seminal work on *The English Villager in the Thirteenth Century*, and now Mr Williams in a more limited way in the book under review. It is one of the merits of his excellent and stimulating book, so full of good meat and ranging over such a wide field of social life, that it should raise so many other important questions. *The Sociology of an English Village* is a pioneer study, as others have remarked. It makes a limited, though valuable, use of historical sources; but it points the way to an even richer study based upon the local historical records of the past 450 years.

W. G. HOSKINS

ESMÉ WINGFIELD-STRATFORD, *The Squire and his Relations*. Cassell. xii+424 pp., illus. £2 2s.

A new book by Esmé Wingfield-Stratford must always be looked forward to with lively anticipation by those who have read his earlier works. He is gifted with a persuasive style though it is occasionally marred by such lapses as "thought up" and a rather too frequent use of the phrase "stay the course." His learning is exhaustive, and he has a freshness of outlook that is always stimulating, and rarely a dull acceptance of traditional views. We must always be thankful for such writers, even if we do not agree with all their conclusions.

The present book is, as its title indicates, a history of the squirearchy as well as its apologia. It traces the rise and decline of the landed gentry in the local and national government of the country, and defines the period of its effective control over and leadership in rural England, from Tudor to Victorian times. It even anticipates a resumption of authority and direction by a new race of squires in modern times, which seems an unlikely event in these days of official decisions and advice.

There is much in the book that is challenging, and that is one reason why a reviewer

must exercise caution equal to that exercised by the writer in presenting his conclusions. It is altogether too easy to condemn a book because it contains some statements with which it is impossible to agree. Few people would, I imagine, be prepared to accept the conclusion that the relations between the labourer, cottager, farmer, and landlord were always amiable, and that the rural poor always accepted their situation without resentment. The only active protest against his conditions that is noticed here is the Captain Swing riots of 1830, and a novel view of these is presented. The rising was not the result of hardships caused by enclosures. It broke out in the south-east where the open-field system was abolished, if it had ever operated, before the sixteenth century. This is certainly true, but the sporadic riotings of 1795 and 1816 are not mentioned. Whether the situation of the labourer at these dates was the effect of the eighteenth-century enclosures or not, it was desperate, and the men and women indicated it in the only possible way. They seized stocks of grain, flour, and provisions and sold them at what they estimated to be fair prices. Twenty-five years before Arthur Young reported that a labourer had denied that thrift would help him, asking whether he would be allowed land for a cow if he saved his money, and calling raucously for another pot of beer. These things do not indicate contentment.

Nevertheless nothing can be more true than that the great landowners took the lead in farming during the eighteenth century. The names of Tull, Townshend, Coke, the Duke of Bedford, and innumerable others spring at once to mind. They were not altogether philanthropists. They wished to improve their estates and to make larger incomes from them, but they did make English farming a pattern for the world in their day. After 1830 their interest declined though there are great names associated with the foremost agricultural societies during the nineteenth century, as any reader of the journals and transactions is forced to recognize. The squirearchy did not perform the same func-

tion individually in that century as in the preceding despite the members of these corporate bodies. An excellent illustration of the changed outlook of the landed gentry is that the country house libraries were not expanded by the purchase of contemporary literature after about 1830, and this is carefully underlined.

The steady increase in local power of the squires by reason of the decentralized system of government from Tudor times and the part they played in national government until the rise of the manufacturers is described; their promotion of legislation to support the agricultural interest is carefully worked out.

In spite of their apparent homogeneity the squires were a mixed bag, as every class of people is; and their ranks were constantly being depleted by the failure of families, either by sterility or stupidity. Similarly new blood was always being infused by the penetration of new rich into their ranks. And both by reason of isolation and of wealth there was amongst them a great freedom to develop individuality. None of these points is missed in this story and many more are discussed. It is a fascinating book to read, but I cannot help feeling that the examples given are to some extent selected, as is possibly inevitable. For this and other reasons the book is rather provocative, but what is the use of a book on such a subject that is not?

Few writers could hope to write the history of a social class so that all its readers would agree with it in its entirety, but this study must be read by all who wish to know something of a most important class of countrymen, whose influence on the development of our farming was so great. Its partiality can be excused in its writer.

G. E. FUSSELL

VICARS BELL, *To Meet Mr Ellis: Little Gaddesden in the Eighteenth Century*.

Faber and Faber, 1956. 160 pp. illus. 15s. William Ellis of Little Gaddesden wrote a great many farming textbooks in the second quarter of the eighteenth century. His agricultural precepts, many of which naturally

appear again and again in the different books, are interlarded with anecdotes of persons and their actions, stories of gypsies, horse copers, and so on, many of them having quite a Borrovian flavour. Much of this material was condemned at the time and by later critics as irrelevant padding which only obscured what ought to have been his main and only theme.

Mr Bell rejoices in these details. From them, and the contents of Ellis's *Country Housewife*, he has attempted to describe life as it was lived in Little Gaddesden about 1750. He is fortunate in being able to supplement Ellis by the observations of that clear-eyed critic, Pehr Kalm, who was at Little Gaddesden in 1748. He has also used the contents of the parish chest. It is difficult from such limited material to collect any clear impression, and the voluminous quotation necessarily carries with it a rather disjointed effect. The chapter headings are most felicitous.

The book portrays every aspect of life in this village as fully as the sources used will allow, and supplies details of everyday occurrences in the kitchen, the cowshed, the field, and the fireside. The details, however, remain details and are not woven into the story of a day, a week, or a season. They are just happenings, and in so much are very similar to the routine of seed-time and harvest, lambing and calving, and so on that are the events in all villages, and which have been described in so many local histories. The more of such collections of details the better, I suppose. The obvious similarities are corroborative, the differences informative about local variations; but I feel that Mr Bell was often as greatly intrigued by oddities as Ellis and Kalm were, and as perhaps I am. For example, the hay lathe in Ashridge Park, 1748, illustrated on p. 135, is obviously the same as that described by Sir Hugh Plat as used at St Albans a hundred and fifty years before. This is a detail for me; amongst the others there must be some for other people. That is the value of such compilations.

G. E. FUSSELL

H. E. DALE, *Daniel Hall, Pioneer in Scientific Agriculture*. John Murray, 1956. 242 pp. 21s.

SIR E. JOHN RUSSELL, *The Land Called Me: An Autobiography*. George Allen & Unwin Ltd, 1956. 286 pp. 25s.

The story of the development of agricultural organization, education, and research as they are today is in all essentials a twentieth-century story. Hall, Dale, and Russell, the three men with whom these two books are associated, played leading rôles in the formative phases of this story. Sir John Russell, the sprightly octogenarian who is happily still with us, also writes the foreword to the book on Daniel Hall. The first sentence of this foreword—already much quoted—can aptly be applied to all three, for they all belonged to “the band of pioneers who in the 1890’s refused to accept the widespread view that British agriculture was dead and only awaited burial at the hands of the Board of Agriculture.” That is why Dale’s elegant and scholarly biography of Daniel Hall and the revealing asides in Sir John Russell’s characteristically modest autobiography are important to the agricultural historian.

In the words of his biographer, Sir Daniel Hall “did a remarkable work, and he was a remarkable man.” That work falls conveniently into three parts: that which was accomplished before, during, and after his fifteen years as Development Commissioner and as a higher civil servant.

Born in Rochdale, educated at Manchester Grammar School, and proceeding to Jowett’s Balliol as a Brackenbury science scholar, Hall started his career with a short spell of schoolmastering in Birmingham. The turning-point came with the decision to become a lecturer under the University Extension Movement in Kent and Surrey at the time when the “whisky money” was beginning to lubricate the educational machine in rural England. Henceforth he made it his mission “to carry science to the farmers.” In 1894 Wye College was started and Hall became its first principal. His pioneer courses at Wye were widely fol-

lowed and to this day their influence is discernible in the agricultural curricula of colleges and universities. In 1902 Hall was appointed Director of Rothamsted Experimental Station, then at a critical stage in its history. Here for the next ten years he revitalized the work of Lawes and Gilbert, and developed Rothamsted on lines which reflected views he had already formed about the direction in which research in agricultural science should go if it was to meet the needs of farming in the modern world.

The five books which Hall found time to publish in this first period up to 1912 are now of great historical interest. *The Soil, Fertilizers and Manures, The Feeding of Crops and Stock* are still read for their intrinsic worth, but they are now notable as an indication of the immense strides in agricultural science which they heralded. In the words of Sir John Russell, they are “a remarkable trio which we are not likely to see repeated as it is improbable that any one in the future will be competent to write on all three of these subjects.” The other two books—*The Book of the Rothamsted Experiments* and *A Pilgrimage of British Farming*—are “already classics in the sense that they will always find readers so long as men feel any desire to know the history of agricultural science, or to see a picture of British farming and the British countryside as they were in the days before the great wars.”

The two chapters which deal with the eventful years from 1910 to 1927 are as much a history of agricultural research and administration as a biography of Hall. They gain authority from having been written by a distinguished civil servant who occupied a key post from which to observe the events he chronicles, and who was, moreover, the author of two standard books on the working and the problems of the higher civil service. The pioneering story of the Development Commission and the revealing picture of the administrative machine in action given in these two chapters make them of absorbing interest both to the agricultural historian and to the student of government.

Hall was made an original member of the

Development Commission set up in 1910 to administer the £2,500,000 Development Fund which had its origin in the Lloyd George Budget of 1909. In 1912 he accepted the offer of a paid Commissionership, thereby becoming virtually the Commission's permanent adviser. Before the end of its first year the Commission had decided to do three things: to extend research and education; to promote inquiries to measure the economic possibility of establishing flax, hemp, tobacco, and sugar beet in this country; to encourage the organization of agricultural co-operation. The promotion of research, education, and advisory work was, however, soon to become the keystone of the Commission's activities. It was as one of the two architects (the other was Sir Thomas Middleton with, interestingly enough, the 'synoptic' influence of Sydney Webb in the background) of the implementing structure that Hall was to make his great and enduring contribution. This structure had three tiers. First, the 'agricultural organizer' and the 'farm institute' catered for the farmers at the county level. Secondly, the 'advisory officers' centred on colleges and universities stood to the county organizers "in something like the same relationship as the medical consultant to the general practitioner." Thirdly, a chain of specialized institutes closely connected with universities and colleges provided for systematic, continuous, and fundamental research in the various branches of agricultural science. So far as the third tier is concerned there can be no dissent from the judgement that "Hall, far more than any other single man, may justly be called the creator" and that in the event he gave this country one of the best systems of agricultural research to be found in the world.

Hall's translation from the Development Commission to be Permanent Secretary to the Board of Agriculture in 1917 started "the least happy and the least fruitful period of his life." It lasted only three years, but the candid and detailed record of these three years given by his biographer are of the greatest interest and for two main reasons. First, the record

happens to deal with the critical years when real power in agricultural affairs had passed largely from the Board to the war-time Food Production Department whose Director-General was the 'bonny fighter' Sir Arthur Lee (afterwards Lord Lee of Fareham). It fell to Hall, however, to advise and to help his chief Sir Rowland Prothero (afterwards Lord Ernle) to pilot the contentious Corn Production Bill through Parliament and the story of the passage of that bill given here makes good reading. Secondly, the record gives a frank and searching account "of the revolutions in the Board's higher command" which stemmed from the reaction of the orthodox higher civil servant to "the advantages and disadvantages, to both the parties concerned, of the entry of men from other professions into government service at a mature age." In 1919 Hall ceased to be Permanent Secretary but he remained a civil servant for a further seven and a half years in the newly created office of Chief Scientific Adviser and Director-General of the Intelligence Department. In this office, and later as a member of the Agricultural Research Council, he had the satisfaction of assisting actively in the task of bringing to full and vigorous working order the great schemes of research and education which he himself had designed at the Development Commission.

At heart Hall "was always more of a gardener than a farmer," and it must have been with the greatest pleasure that in 1927 he followed his great friend Bateson as Director of The John Innes Horticultural Institution on the outskirts of London. Here he remained until war came in 1939, when he made his last move, this time to the Lord Wandsworth College in Hampshire, the home of yet another educational venture to which he had already given long and loving service. One aspect only of his many and varied endeavours during this third and last phase can be mentioned here. "For many years the agricultural economist and reformer in him had been steadily growing on the man of natural science," and in his last book—*Reconstruction and the Land*—published the year before his

death, he advocated a comprehensive policy which would permit science to have full scope in determining the structure as well as the practice of British agriculture.

Unlike a good biography, which evokes criticism, a good autobiography evokes enjoyment. By this test Sir John Russell's urbane autobiography is a very good book indeed. The very title tells us a lot about the man. Sir Daniel Hall was attracted to agriculture mainly because he saw the golden opportunity it presented for scientific adventure and, as stated above, his last book proposed an all-embracing plan for the future of farming. Sir John Russell tells us that he first got interested in agriculture while doing social work amongst the poor of Manchester, when he "conceived the idea of establishing an agricultural settlement, to which people who had failed to make good in the towns might come." He knew nothing about country life in England, but he "remembered the little farms of Wales and how vastly better the people lived there." Since then Sir John has become a good countryman himself, but he has never lost his early concern for the underprivileged. His autobiography shows him to be, in truth, a very human scientist.

Like the biography of Hall, *The Land Called Me* also spans a long period of incredible change and can be conveniently considered in three phases. Each phase is, in its different way, of interest to the historian.

The first six chapters bring the story up to 1901 when, at the age of twenty-nine, he was appointed on Hall's staff at Wye College. For the social historian these chapters, and especially the first three, are of absorbing interest. Without in any way dramatizing his beginnings Sir John gives a vivid picture of his boyhood and youth in the London and the North of the last quarter of the nineteenth century. It is the familiar story of the fight against black-coated poverty waged by the middle class, with their respect for education and their determination to win the benefits which they believed education alone could bring them. In the case of young Russell this

determination took him successively to the Presbyterian College, Carmarthen, to the University College of Wales, Aberystwyth, and, for six years as student and demonstrator, to the Owens College, Manchester.

In the four chapters covering the second phase Sir John tells of his life at Wye and of his thirty-one years as Director of Rothamsted. He is far too humble a man, however, to do justice to his great achievements in this responsible position. But this can surely be said, that Sir Daniel Hall was as lucky to have been followed at Rothamsted by Sir John Russell as Sir John tells us he was lucky to follow Hall.

Sir John has always been a great traveller, and the remaining eight chapters of the autobiography narrate the incidents of his many journeyings in Europe, Africa, India, Russia, and America. These chapters help to explain how it came about that an octogenarian was to be the author of *World Population and World Food Supplies*, the standard book which is likely to remain the chief quarry for scholars in search of the facts of world agriculture at the mid-century.

EDGAR THOMAS

NIGEL HARVEY, *Ditches, Dykes, and Deep Drainage*. Young Farmers' Club Booklet No. 29. Published by Evans Bros. Ltd, for the National Federation of Young Farmers' Clubs. 48 pp., paper covered. 2s. 6d.

The history of land drainage could be made into a fascinating subject, though it has to be admitted that few, if any, land drainage historians have taken their opportunity. On this account Mr Harvey's book is all the more welcome. It sets out readably, concisely, and comprehensively the story of land drainage in this country. The common error of supposing that land drainage is a Dutch importation and the giving of the paternity of land drainage to Vermuyden is avoided. Mr Harvey is well aware that drainage in Romney Marsh is probably older than drainage in the Fens, and that in the Fens much valuable work was done in the Middle Ages.

A little more attention might have been

paid to the local authorities who have been responsible for land drainage works. Their history is of interest not only because it goes back very far, but because they are among the few survivors of local authorities which exist for the carrying out of a special purpose. It may well be, however, that Mr Harvey did not think that this was a suitable topic for a booklet directed to Young Farmers' Clubs.

J. E. MAHER

GEORGE EWART EVANS, *Ask the Fellows who Cut the Hay*. Faber and Faber, 1956. 250 pp. 25s.

This book is not history in the precise modern connotation of the word. It is scantily indexed and wholly undocumented. But it is history in the sense that Gilbert White and the Sturt-Bourne duality wrote history, at first hand, or at most second hand. And at times Mr Evans echoes more than a little of the talent which, by exact reporting and unembroidered prose, conveyed so valid a picture of Selborne and the Surrey Labourer.

The author and his wife went to live in the Suffolk village of Blaxhall in 1948 and, being observant people, soon realized the wealth of material awaiting the industrious collector of the ways of a passing, and immediately past, generation—the Victoriana and the Edwardiana of the East Anglian village. Being industrious people, they set about collecting it; and Mr Evans's narrative of the careers, habits of life, methods of work, and material and spiritual cultures of Blaxhall, as so attractively presented in *Ask the Fellows who Cut the Hay*, makes a substantial contribution to rural history.

Much of the content of this book will be familiar in a general way to most readers: we all know of the harvest customs, the itinerant gangs of sheep-shearers, the village ways of bacon curing and brewing. What is valuable here is the precise and detailed account of how such work was done in one particular place, giving concreteness to generalization and a local home to ancient crafts. To most of us, also, these matters have become so shrouded in sentimentality as to be abhorrent:

Mr Evans, by rescuing the memories and the oral traditions of his dying neighbours and immortalizing them in print, does a considerable service in substituting for a cupid-blinded nostalgia a sober appraisal of the facets of rural Suffolk before the agricultural revolution of the last half-century. He has, as it were, photographed the visage of a drowning culture as it comes up for the last time, and not left it to the historian to reproduce its lineaments as best he can from a bare skeleton in a record office mortuary. It was a task which urgently needed to be done before it was too late; and he has done it with enough imagination, and with the mysticism of the muck-and-magic school sufficiently controlled, to turn the near-corpses of the immediate rural past into a human entity, and not an angel. There are leaky thatch and streaming walls here, beside the smell of bacon smoking in the chimney corner; and aching muscles and sodden clothes beside the home-brewed ale.

Mr Evans pins his facts on to a select few of the aged folk of Blaxhall. To Robert Savage, the seventy-five-year-old shepherd, for example, he attaches his account of the shepherding techniques and the shepherd's clothes and tools of the past three-quarters of a century. Here, as elsewhere in this book, the reporting is explicit: Savage and his contemporaries held the crook by the lower end of the handle, slid it up the near hind leg of the sheep to be caught until the thigh was wedged in it, and then by a twist of the wrist threw the sheep on its back—a method of throwing which must have led to a high incidence of blackleg in Blaxhall.

Some of the year's work with the flock unfortunately goes unreported: a long aside on Coke of Holkham, which adds nothing new to history, would willingly have been sacrificed for a description of how a Victorian shearer opened up and clipped the fleece. Mr Evans does, however, remind us that transhumance was not confined to the hills: the Suffolk shepherd also went with his flock to the saltings as, several centuries before, the *bercarius* of Wellingborough took his sheep

to the maritime marshes of Crowland abbey.

The same treatment is accorded the Blaxhall housewife with her baking, brewing, and cheesemaking (Suffolk cheese has been revived in the last year or two); the farmer with his leases, his harvest by contract, and his tools; and the villager in general with his schooling and superstitions, his customs and his dialect. It is a pity, however, that Mr Evans has thought it necessary to pad out an otherwise impeccable piece of reporting with so much conventional parochial history from the parish chest and from irrelevant periods. Without this make-weight matter *Ask the Fellows who Cut the Hay* would be an achievement beyond reasonable reproach; with it, the book is curate's-eggy.

The physical volume itself, like all that issue from the house of Faber, bears evidence of thoughtful design. It is set in Monotype Bell and printed on good white paper with a care for evenness in impression: but the Bewick cuts selected for the chapter head-pieces reproduce ill upon an inhospitably smooth paper; they have lost most of their fine detail, and in one case at least (p. 42) have been so drastically trimmed as to lose their artistic unity.

It remains only to express the hope that Mr Evans's example in rescuing the immediate past from the grave mouth long enough to paint its likeness will be followed in other regions of Britain. The result would be a corpus of material for which all future generations of rural historians could not fail to be grateful.

R. TROW-SMITH

REX C. RUSSELL, *The 'Revolt of the Field' in Lincs. The Origins and Early History of Farm Workers' Trade Unions*. Lincolnshire County Committee, National Union of Agricultural Workers. 1956. 168 pp. 2s. 6d. For half a crown this book is excellent value. It traces the history of farm workers' trade unions in Lincolnshire by means of selected extracts from local newspapers and official blue books with the minimum of interspersed commentary. The result is a lively month-by-

month account of union agitation as it can be pieced together from journalists' reports and correspondents' letters in the local press. It is essentially a tale told by contemporaries, full of their own prejudices, threats, and fears, but lacking the bias of after-knowledge. And it makes refreshing reading. Sooner or later, of course, the earnest reader and reviewer begins to feel uneasy because the contemporary account is in some respects misleading. It is an occupational disease of the professional historian to hanker for the balanced, objective, and complete account, and although he may read with enjoyment the stimulating language of the eye-witness, he cannot refrain from summoning the armchair commentator afterwards to his side to put the matter properly in perspective. The enthusiastic, but less earnest reader, however, is free to enjoy the rough and tumble of heated contemporary controversy, and can cheerfully ignore the cool-headed appraisal of the unengaged observer.

The book begins with extracts from the report of the Royal Commission on gang labour in 1867, designed to give a background picture of the working conditions of agricultural labourers. The use of this report as the only source of information is unfair, since it puts a one-sided and, in consequence, an unduly gloomy view of the situation. Gang labour was common in only two out of the four main farming regions of Lincolnshire: on the wolds and limestone heath, where turnip cultivation had led to the extensive ploughing-up of sheep walks and rabbit warrens, and in the fens, where drainage had enabled the former summer pastures to be transformed into fertile arable fields. Many new farms were carved out on these reclaimed lands, but they lacked adequate cottage accommodation for all the extra labour needed. Hence, gang labour came into existence—an innocent expedient to meet an emergency, which brought unanticipated social evils in its train. The working conditions of gang labourers were appalling, as the report of the Royal Commission makes perfectly clear, but they were not the working conditions of the typical

agricultural labourer. A few extracts from other Parliamentary Papers of the same period would have shown that Lincolnshire farm workers enjoyed unusually good working and living conditions, judged by national standards. Indeed, a number of passages in the later pages of the book admit that Lincolnshire was a high-wage county. In the early 'seventies, labourers from southern England were being encouraged by their unions to move there, and it was some time before the protests of Lincolnshire workers at the consequent lowering of their wages persuaded the unions to drop this campaign and to encourage instead emigration to Australia, New Zealand, and Canada.

Background matter occupies only fifteen pages of the book, however, and the rest are devoted to newspaper extracts describing the spread of unionism from the early months of 1872 onwards, the first wage successes in 1872 and 1873, the employers' lockout in 1874, the increasing flow of emigrants from Lincolnshire to the industrial north and abroad, the gradual weakening of the unions as depression deepened after 1879 until 1882 when they ceased to be an effective force. The book ends with the year 1892, when the last attempt to breathe new life into the unions had failed. "As far as we know at present," writes Mr Russell, "—and much more research needs to be done—the Lincolnshire farm-worker was unprotected by further rural trade unions until the first World War." Five appendices give a selection of songs sung at union meetings, wage rates at the Lincolnshire hirings from 1870 to 1891, population statistics for some sample parishes in the same period, sample emigration notices, and news items concerning the formation of Union Co-operative stores. On this last subject, and indeed on many others touched upon in the book, Mr Russell points out how much remains to be discovered. Indeed, he is as much concerned to instigate further research and to gather up information from living witnesses as to record the more accessible printed information. Later, perhaps, he will make his peace with the professional historian and pro-

vide the "balanced, objective, and complete account." Meanwhile, we may thank him for performing a task which could profitably be done for all counties, and, moreover, for doing it in a way that brings the agitation vividly to life, through the descriptions of eye-witnesses.

JOAN THIRSK

A. H. SMITH, *English Place-Name Elements*. Cambridge University Press, 1956. Vol. I, A-IW, lvi+306 pp.; Vol. II, J-Y, vi+418 pp. Each 35s.

In 1924 the English Place-Name Society published a slim volume of some eighty pages entitled *The Chief Elements used in English Place-Names*. The author, Sir Allen Mawer, drew attention in his preface to the heavy but unavoidable handicap under which the book suffered, of being written at the beginning of the Society's work instead of at the end. Now, thirty-three years later, the end is still not in sight, but in the meanwhile nineteen counties have been surveyed, and the quantity of material gathered by the labour of many scholars is great enough to warrant a fresh attempt at synthesis and interpretation. This the present director of the survey, Professor A. H. Smith, has accomplished in the two substantial volumes under notice.

The great historical importance of place-names is now very generally appreciated. They are living witnesses to the unrecorded history of our countryside, and where the archaeological and documentary evidences are alike scanty they become a primary source of knowledge. Any student of agrarian history who reads Professor Smith's articles on such elements as *by*, *feld*, *ham*, *leah*, *stoc*, *tun*, *thorp*, and *wic* will learn much about the shaping of the English landscape which could be learnt in no other way.

The volumes provide a comprehensive dictionary of the elements found in English place-names before the fifteenth century. They will be an indispensable work of reference for all who use the county volumes, and indeed for all students of English history, geography, and dialects. A reviewer who is not himself a specialist in this field of study

can only salute the unwearied industry and wide scholarship which have gone to the making of these volumes. It is only here and there that one notices a small omission. For example, the article on *cot* does not mention that the names of four manors in the Devonshire Domesday, three of them quite substantial properties, are compounded of this element and the names of their owners in 1066, so that here at any rate the meaning is not just 'a cottage, a humble dwelling'. On p. 87 of the first volume we read that *celce* is not recorded in Old English, but p. 278 contradicts this by citing *Celce-hyth* (= Chelsea), a well-known instance. There is at least one exception to the statement that "saints' names do not occur" in combination with *-mynster*, for Brannocmynster (= Braunton, Devon) is now known to signify the church of St Brannoc. The equation of *ceorl* with "one of the lower classes of freeman, a freeman below the class of noble, an ordinary freeman," introduces a gloss for which there is no philological warrant, and could not have been made if the author had remembered that Alfred the Great, in his translation of Orosius, uses the word as equivalent to *libertinus*, a former slave who needs a further act of emancipation to make him fully free.

It was no doubt convenient to issue the work in two volumes, but should not the pagination of a dictionary be continuous? A minor blemish, common to this and all the Society's publications, is that nowhere are we given a list of the counties which have already been surveyed. It is to be hoped that one of the blank pages at the beginning or end of future volumes will be utilized for this purpose.

H. P. R. FINBERG

H. GODWIN, *The History of the British Flora: a factual basis for phytogeography*. Cambridge University Press, 1957. viii+384 pp., illustrated. 90s.

Any worker considering the earliest impact on Britain of man as an agriculturist must have come up against the problem of what was, in fact, the native vegetation of these

islands. Dr Godwin's book provides a comprehensive survey of the available data, from which he has built up a picture of the changing flora of Britain throughout the Quaternary era. He reviews the techniques of pollen analysis and identification of other sub-fossil plant remains, by which this volume of evidence has been accumulated, and in the light of his unique experience as the pioneer of Quaternary research in Britain, he discusses the pattern of change in the British flora, and how far the changes since the last Ice Age have been the result of immigration, changing climate, and, finally, of man's influence.

The major portion of the book (224 pages out of 367) consists of detailed records of all British species, including crop plants, which have been identified from glacial and subsequent deposits. For each species, a list of localities and authorities is quoted, and many distribution maps are given. A section on cereals, pp. 262-73, based on the work of Jessen and Helback, presents the best modern account of the history since Neolithic times of the various types of wheat (spelts, emmer, and bread wheats), oats, barley, and rye.

In the discussion which follows the long section on records, Dr Godwin points out that our knowledge of the rich flora of the Late-glacial period (approximately 12,000 to 8,000 B.C.), acquired from recent investigations at many sites, establishes beyond doubt the native status of "many weed species hitherto thought to be introductions to the British Isles by Neolithic and later agriculturists"—e.g. *Linaria vulgaris*, *Centaurea cyanus*, etc. Species such as these, together with thistles, docks, and plantains (see Tab. VII, p. 311), flourished in the open conditions of the Late-glacial period, but were strikingly reduced and restricted in range by the post-glacial spread of forests, and only reappeared with the destruction of the forests (which were the natural climax vegetation of Britain in the post-glacial climate) by Neolithic and later man.

Dr Godwin describes the successive migration and establishment of the forest

trees in the earlier part of the post-glacial period of increasing warmth, and discusses the concept of the climatic optimum in the Atlantic period (c. 5000-3000 B.C.), followed by climatic deterioration. He emphasizes that throughout the Late-glacial and until the end of the Atlantic period, Palaeolithic and Mesolithic man was a creature dominated by his environment, and that the greatest change in man's position in the ecosystem came with the migrations of Neolithic peoples with their techniques of cultivating cereals and keeping domestic animals, which occurred in the drier Sub-boreal period which followed the Atlantic.

The sections on "The Sub-boreal period and prehistoric husbandry" and the subsequent "Sub-atlantic period and climatic deterioration" (pp. 331-45) provide a valuable summary of the evidence on the beginning of agriculture in Britain, and the effects of widespread forest clearance, which began in Neolithic times. Dr Godwin's own work on Hockham Mere provides evidence for dating the treelessness of the Breckland from the time of the Neolithic flint-miners of Grimes Graves, and he refers at length to Iversen's pioneer work on Neolithic clearances in Denmark, with his evidence for two thousand years of shifting clearance and cultivation followed by local regeneration, before the permanent widespread forest clearances of the Iron Age.

In his final pages, Dr Godwin considers briefly how the landscape and flora of Britain in historic times have resulted from the impact of successive waves of human settlement on the primeval forest and peat mires. He concludes his survey with a short consideration of Romano-British agriculture, and lists species which are regarded as having been introduced at this time, either as weeds or as economically useful plants.

WINIFRED TUTIN

MALCOLM GRAY, *The Highland Economy, 1750-1850*. Oliver and Boyd, 1957. 280 pp. 25s.

There are several reasons why the develop-

ment of the Scottish Highlands attracts the economic historian. First, it is a region which has a sufficient degree of physical, economic, and social homogeneity to prompt and justify a search for those generalizations which give regional studies their universal value; secondly, there are many useful and accessible sources of evidence, few of them squeezed too dry to quench a scholar's thirst; lastly, the process of change in the Highlands has produced moments of human drama and struggle that stir all but the stony-hearted and tempt a lowland Scot to claim Highland ancestry almost as sentimentally as an American tourist.

Yet, with all the books born out of this, the publisher's claim that Mr Gray has written the first economic history of the Highlands as a distinct region is a truthful advertisement; it is also a modest one, for *The Highland Economy* is an excellent book which deserves to be added to the (all too short) list of standard works on Scottish economic history.

The century covered by the book ended with Scottish industry almost on its feet and the highland economy almost on its knees. It is true, as Mr Gray illustrates, that in the southern and eastern parts of the Highlands the old agrarian economy became more assimilated to lowland ways and that, by 1850, many people enjoyed higher economic standards than in 1750; but in the north-west, and in the islands, the total effect was one of economic degeneration. This contrast between developments in the north-west and the south-east of the Highlands is one of the most interesting features of Mr Gray's study. Differentiation taking place within a fairly homogeneous region invariably provides useful material for social and economic analysis.

The key, according to Mr Gray, is to be found in the relations between agriculture and industry. In the south and east "industry and agriculture were conceived to have separate spheres of action" (p. 71); people were detached from the land and concentrated in towns and villages, leaving a thinner but economically viable rural population. In the north-west "the more enticing prospect was

in encouraging industries—kelp and to a lesser extent fishing—which, being intermittent and seasonal, could best grow among a peasantry still with its land and in its old settlements” (p. 72). The population grew most rapidly in the north, remaining fairly stagnant in the south and east.

No history of the Highlands can avoid discussing the landlords (in the eighteenth century over half of the land surface was owned by less than half a dozen proprietors), and Mr Gray’s valuable account of the rise and fall of the kelp industry helps to reveal their directing rôle in the process of degeneration. A greater density of population on the land—which prevented any major improvements in technique—was encouraged and rents were screwed up so as to force tenants to work with kelp for piece-rate wages. Outside the kelp areas there was also a general rise in land rents before 1815 and landlords had by then greatly increased their share of the agricultural income. When cattle prices fell after this date rents remained fairly stable, large-scale

sheep-farming was developed, and only the potato enabled the Highlanders to maintain and feed their families. The potato famine of the 1840’s brought disaster to the people.

Mr Gray uses his sources skilfully; he also introduces something of an innovation for Scottish agrarian historians in a statistical appendix which presents the data in an analytical way, taking us far beyond the catalogue and travelogue. Yet there is still a great deal left to be done, and here and there one wishes Mr Gray had pursued his labours even more tirelessly. There is more than “scattered information about grain prices from 1750” (p. 141), and it is hardly true that the price of oatmeal “remained almost stagnant” from 1750 to 1815 (*ibid.*). The price, wage, and rent movements of Scottish agriculture can probably be more accurately measured than is generally thought. Mr Gray’s valuable work should inspire others to attempt that—and the many other—tasks in Scottish agrarian history that remain unfinished.

GEORGE HOUSTON

**The British Agricultural History Society**

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*As from 1 September 1957 the address of the Secretary of the  
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